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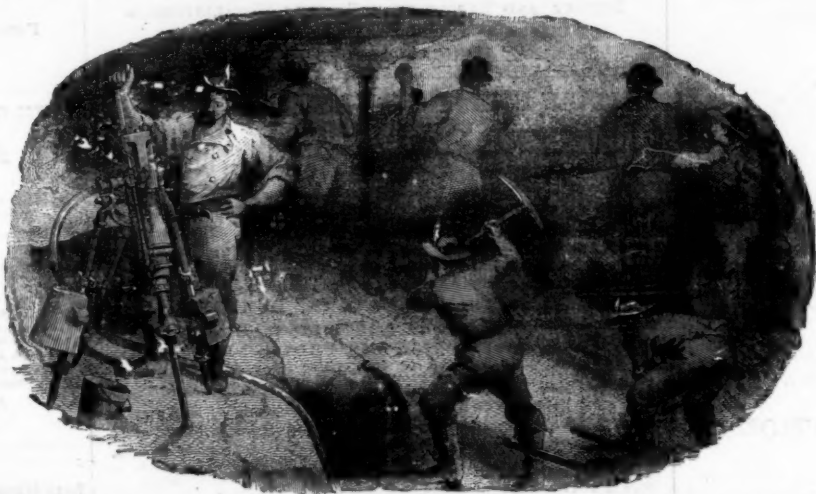
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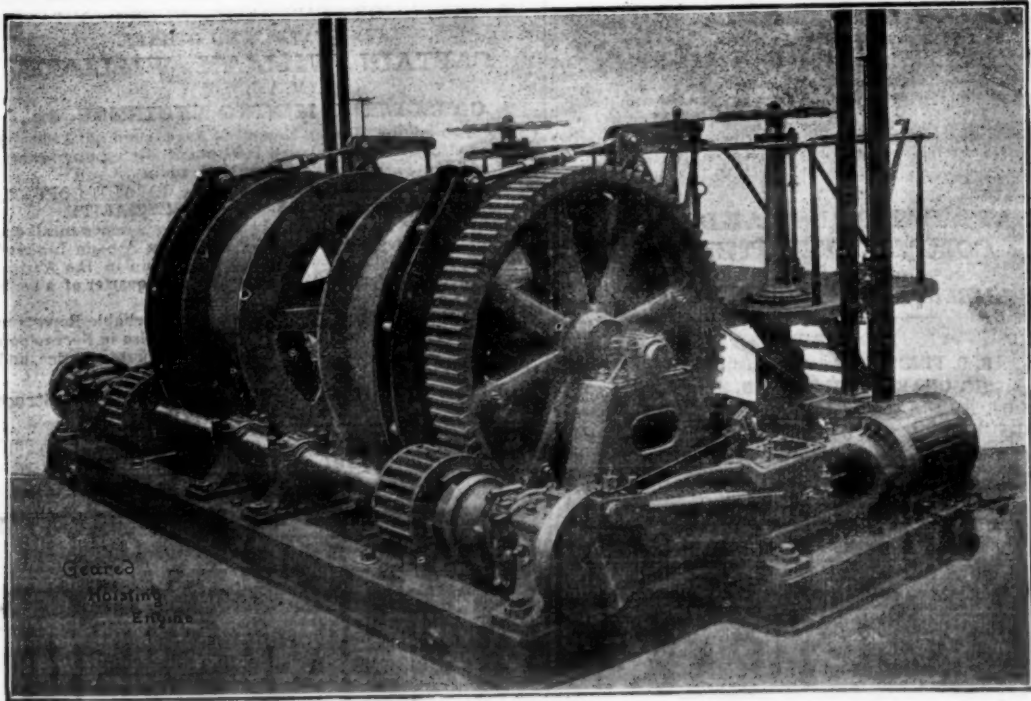
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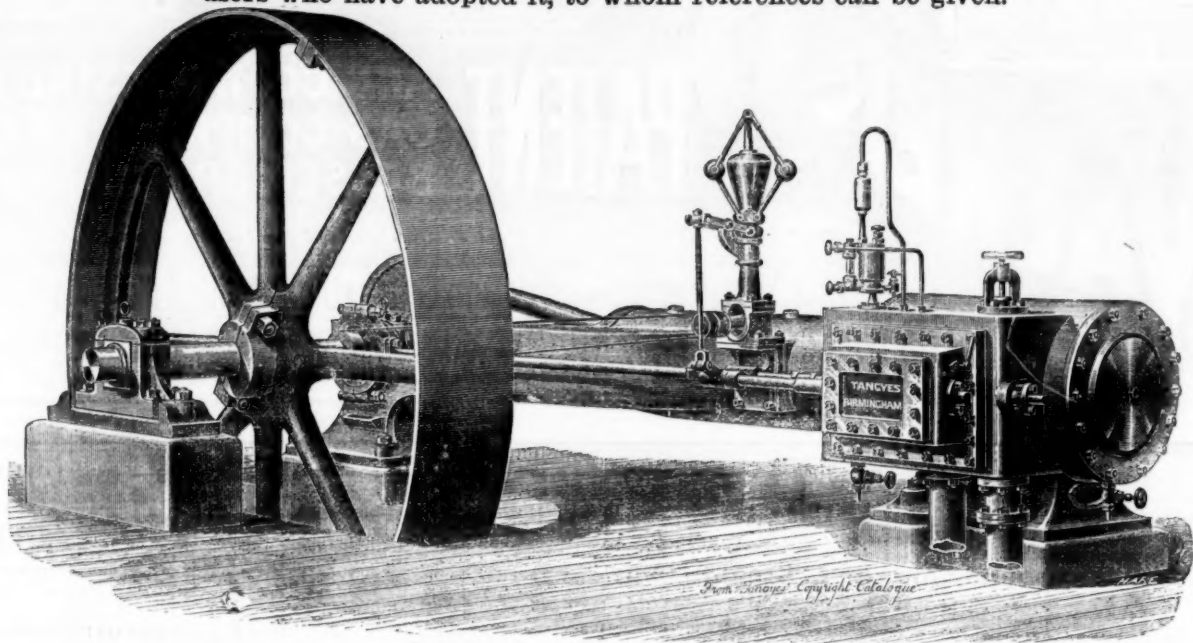
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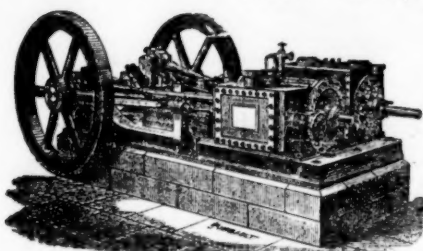
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Gold Medal, International Exhibition, Paris, 1889.

Gold Medal, Exhibition of Mining & Metallurgy, London, 1890.

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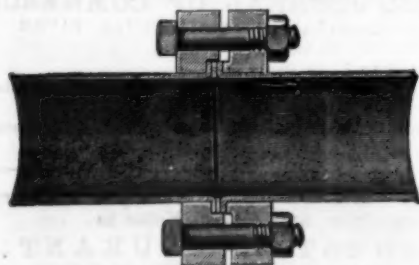
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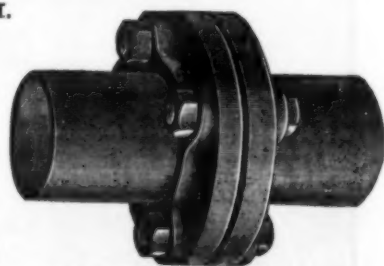
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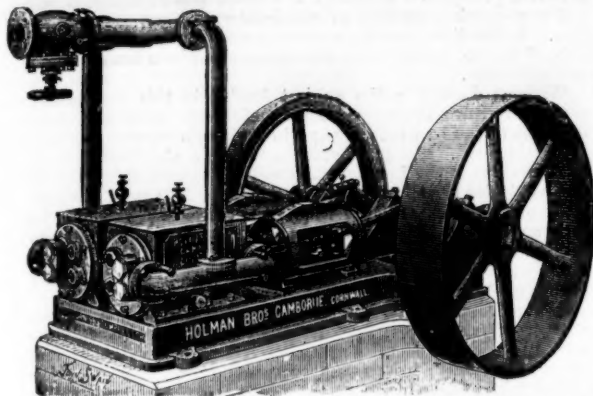
PLAN OF PATENT FLANGED JOINT.

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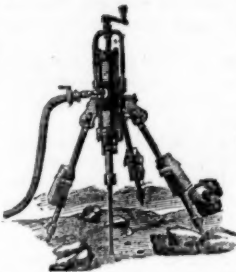
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FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.



FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

Three Makers
represented.
AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

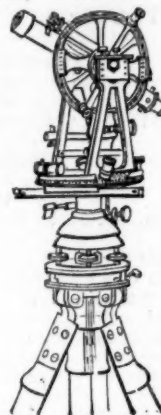
At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE** **46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

Estimates for **ROCK BORING PLANT** and **GENERAL MINING MACHINERY** on Application.

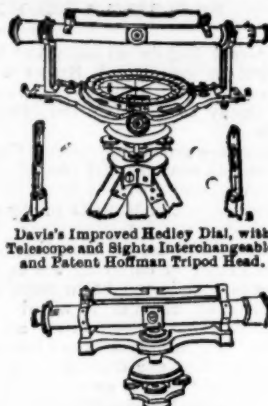
London Representative: Mr. E. M. TOUZEAU, Leadenhall Buildings, London, E.C.

JOHN DAVIS AND SON,

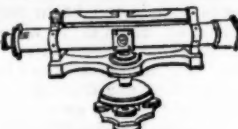
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Gold Medal Awarded Mining Exhibition, 1890.
"THE ENGINEERING TELEGRAPH CODE USED."

HENDERSON'S RAPID TRAVERSE.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

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The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Sinking Well, November 3 (Glebe).—For the sinking of a well and borehole for water at the board's pumping station at Ravecliffe Bridge, near Gole, Yorkshire, for the Gole Local Board. Specifications to be seen or a copy thereof obtained on application to the engineer, Mr. E. Muir, M.I.C.E., 37, Brown Street, Manchester, or at the board's office.

Buffer Casings, November 3 (London, E.C.).—For the supply and delivery of buffer casings and springs, for the Madras Railway Company, as per specifications and drawings to be seen at the company's offices. Tenders to be delivered in sealed envelopes, addressed to Mr. Julian Byrne, secretary, 61, New Broad Street, London, E.C.

Cranes, November 5 (Belfast).—For the supply, erection, and setting to work of two locomotive steam cranes, each capable of lifting 3 tons at a radius of 45 feet, for the Belfast Harbour Commissioners. Copies of specification and tender to be obtained from the harbour engineer, Mr. G. F. L. Giles.

Various Railway Stores, November 6 (London, E.C.).—For the supply and delivery of loco tubes, copper tubes, rods and rivets, wire metal ferrules, steel bars, screw taps, zinc sheets, bolts and nuts, carriage locks, band saws, iron shoots, fireclay and bricks, leather cloth, plate glass, vulcanised rubber, transfers, watch materials, Erhardt's weighing machines, and other stores, as per specifications to be seen at the office, for the Madras Railway Company. Tenders to be delivered in sealed envelopes, addressed to Mr. Julian Byrne, secretary, 61, New Broad Street, London, E.C.

Rails, November 6 (India Office, S.W.).—The Secretary of State for India in Council is prepared to receive tenders to supply: (1) steel rails; (2) steel fishplates; (3) steel fishbolts; (4) wrought iron spikes for rails; (5) wrought iron bearing plates for rails. The conditions of contract may be obtained on application to the Director-General of Stores, India Office, Whitehall, S.W.

Boring, November 10 (Milton).—The Joint Water Committee of the Swadlington Local Board and Ashby-de-la-Zouch Local Board invite tenders for the work required for developing and proving the yield and quality of water at the site of their proposed pumping station at Milton, 7 miles north of Swadlington, and 6 miles east of Burton-on-Trent, up to a quantity of not less than 1,500,000 gallons per day. Drawings and specifications may be seen at the Loughborough office of Mr. George Hodson, M.I.C.E., F.G.S.

Fences, November 13 (Dover).—For the construction of fences, &c., at the cottages, hospital, and Glarendon Park, for the Dover Town Council. Plans may be seen and specifications and forms of tender obtained at the office of Mr. E. Wollaston Knocker, Town Clerk, Dover.

Waterworks, November 13 (Pershore).—For the construction of water tanks, laying of 3 inch and 2 inch cast iron mains, erection of engine shed, and other works in connection with the water supply for the villages of Wyre Piddie and Bishampton, for the Pershore Union Rural Sanitary Authority. Plans, sections, and specifications may be seen, and forms of tender and quantities obtained, at the office of the engineer, Mr. J. Edward Wilcox, C.E., Union Chambers, 57, Temple Row, Birmingham.

Engines and Boilers, November 14 (London, E.C.).—For the supply and delivery of 24 locomotive engines and 12 boilers, for the East Indian Railway Company, as per specification and drawings to be seen at the company's offices. Tenders to be sent to Mr. A. F. Dunstan, secretary, Nicholas Lane, London, E.C.

NEW PATENTS.

LIST OF APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs. Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

- 19500 Frederick Henry Royce, 53, Arcade Chambers, St. Mary's Gate, Manchester.—Improvements in the means of transmitting power from gas engines, steam engines and the like, for driving dynamos and other apparatus.—October 15.
- 19509 David Davy, 53, Chancery Lane, London.—Improvements in gas and other internal combustion engines.—October 15.
- 19515 Donald Burns Morison, 48, Lincoln's Inn Fields, London.—Improvements in propeller shafts for marine engines.—October 15.
- 19523 Andrew Betts Brown, 57, St. Vincent Street, Glasgow.—Improvements in hydraulic pumping apparatus for mines.—October 16.
- 19528 Joseph Alfred Fisher, Dock House, Billiter Street, London.—Improvements in non-conducting compositions for covering water and steam pipes, boilers and other surfaces.—October 16.
- 19546 Jonathan Mills, 6, Lord Street, Liverpool.—Improvements in and relating to apparatus for inducing air into furnaces.—October 16.
- 19552 Herman Emil Franz, 77, Chancery Lane, London.—Improvements in and relating to steam generators.—October 16.
- 19570 Andrew Brown, 2, Lancaster Place, Strand, London.—Improvements in apparatus for breaking rock, stones, and similar material.—October 17.
- 19571 Thomas Brown, 23, Southampton Buildings, Chancery Lane, London.—An improvement in picks and their attachments to shafts.—October 17.
- 19584 Peter B. Bradley, 65, Chancery Lane, London.—Improvements in machinery for pulverising ores or other substances.—October 18.
- 19586 Vito Montalto, 323, High Holborn, London.—Device for regulating the pressure in pumps.—October 18.
- 19598 William Arthur Thoms and William Henry Burgum, 58, Lombard Street, London.—An improvement in electro-deposition of an alloy of zinc and cadmium.—October 18.
- 19596 John Armstrong, 20, Bucklersbury, London.—Improvements in concentrating and storing acids, alkalis, and other chemicals, and furnaces and apparatus therefor.—October 18.
- 19594 Henry Graham Harris, 77, Chancery Lane, London.—Improvements in high speed gas engines.—October 18.
- 195913 Charles Scott Galloway, 57, St. Vincent Street, Glasgow.—Improvements in steam boilers.—October 19.
- 195925 Frederick Paget, 154, St. Vincent Street, Glasgow.—Improvements in and relating to the feeding and stoking of steam boiler and other furnaces.—October 19.
- 19599 Newham Browne, 73, Cheapside, London.—An improved apparatus or valve gear for reading slide and piston valves of engines.—Oct. 19.
- 195999 James Wood Stock, 6, Bank Street, Manchester.—Improvements in or connected with steam boiler furnaces.—October 19.
- 20011 William Chadburn, 15, Water Street, Liverpool.—Apparatus for indicating rate of speed or movement of engines, machines, and the like.—October 20.
- 20071 Louis Bangert, 23, Southampton Buildings, Chancery Lane, London.—Process for coating metals with tin.—October 20.

SPECIFICATIONS PUBLISHED.

15,371, Anders and Kottgen, electro-magnetic motor, 1893; 16,150, Doubleday, secondary battery lamps for mines, 1893; 17,373, Healey, hot air engines, 1893; 21,760, Cowper Coles and Walker, deposition of metals and compounds, 1893; 22,512, Smith, rotary engine, pump, &c., 1893; 23,053, Arnold and Crowther, lubricating bearings, 1893; 4199, Gabbett Fairfax Beardmore, hardening steel plates, &c., 1894; 14,616, Whitting lubricating apparatus, 1894; 16,398, Gates rock and ore breakers, 1894.

The above specifications published may be had of Messrs. Rayner and Company, 37, Chancery Lane, London, at 10d. each including postage.

OUR INQUIRY COLUMN.

TO CORRESPONDENTS.

Correspondents will please take note that all communications will in future be answered in this column and not through the medium of the post. All questions and replies should be accompanied by the name and address of the writer.

REPLIES.

- DUBITAS.—Certainly; we would advise you to do it.
- W. H.—You cannot go far wrong if you decide upon your course of action.
- A. R. S.—We quite agree with you that experience goes for little. Directors of mining companies are mostly blind to their own as well as to shareholders' interests.
- J. M.—You might realise your holding.
- H. A. G.—We do not care to recommend them.
- T. T.—Yes; they are worth keeping.
- SUBSCRIBER.—(1.) You were certainly very fortunate.—(2.) There is no free market for these shares.—(3.) We do not care to make a particular recommendation.
- NOVION.—1, 3, and 4 are likely to see high prices.—4. Doubtful for much of a rise at present. 5. Impossible to say pending the result of the first trials.
- HUMBER.—They are likely eventually to go much higher.

NITRATE OF SODA.—October 31st, Mr. Thomson Aikman, jun., reports:—"Heavy arrivals have taken place during the week, but only three cargoes wait orders, and 8s. 7½d. is reported refused for large ordinary, while refined has been held for over 9s. per cwt. More moderate estimates of the sailings in October have led to active buying, and a large business has passed at the equivalent of 8s. 10½d. to 9s. for October—November, and 8s. 9d. to 8s. 10½d. for December sailing, closing firm, sellers generally holding for higher rates. The closing estimate of sailings in October is 135,000 tons, with 140,000 to 150,000 tons loading on 1st November. Exchange quoted 13½d., and freights 22s. 6d., with 60,000 tons register disengaged tonnage. Stocks in European ports 98,000 tons, against 78,000 last year; afloat to European ports, 265,000, against 270,000. The value of October—November sailing was 9s. per cwt., against 9s. 1½d.

COAL IN CHESHIRE.—Boring operations, under the auspices of the Freeholders Company and by the agents of Lord Newton, of Lyme Park, have for some time been going on at Hazel Grove, near Stockport and Wilmslow, in Cheshire, the object being to locate a seam of coal said to exist there. Coal has been found at a depth of 1496 feet 7 inches. The width of the strata is 2 feet. Further down at a depth of 1509 feet more coal was found. The aggregate thickness of coal passed through is 10 feet 1 inch.

A UNIFORM METHOD FOR THE ASSAY OF COPPER MATERIALS FOR GOLD AND SILVER.*

By ALBERT R. LEDOUX, New York City.

IN Great Britain all analytical chemists are styled assayers, but in the United States a slight distinction is made, assayers being considered those analytical chemists who have chiefly to do with the determination of the precious metals.

There have grown up around the assayers of precious metals a number of customs and traditions which, as a rule, do not fetter American chemists when called upon to determine the composition or constituents of any samples submitted to them for analysis.

In Great Britain, on the other hand, trade customs even go to the extent of enforcing the employment of an admittedly erroneous atomic weight in certain alkali determinations. If the American chemist is asked to determine the amount of lime in a water, potash in an alkali, or silica in an ore, the owner of the sample does not presume to suggest what method he shall employ, nor does he question his report on the ground that he should employ another method.

But even in America it is different with the assayer. Unfortunately for the guild, as well as for those who have to base business operations on the reports of assayers, customs and traditions as well as divergent interests seek to circumscribe him in his choice of method, and sometimes dictate how he shall perform his operations. This was true at one time of copper, which to-day in England is still determined by the so-called Cornish fire assay, an attempt to imitate in the laboratory the various metallurgical operations in the smelting works, but nowhere in this country is the assayer forced to employ any particular method for determining copper so long as his certificate indicates the true total percentage of copper in the sample. It is true that both buyers and sellers demand use of the electrolytic method, but only because it is the most accurate. In America the trade accepts the assayer's statement as final, and makes its own allowance or deductions from the price asked or paid according as the material is known or supposed to be more or less free from ingredients which would render the smelting and refining more or less expensive and difficult.

But when it comes to the assay of gold and silver ores, or copper mattes and bars containing gold and silver, many of the buyers insist that the assay shall be by fire, while many of the sellers endeavour to enforce special methods known to give higher results than the ordinary fire assay. It is great to the credit of American assayers, as well as an indication of the fair-mindedness of our business men, that there is, as yet, no such class distinction between assayers as we find in England, where some men are known as "sellers' assayers," and some as "buyers' assayers," it being understood that each will employ a method yielding results most in accordance with the interest of the person who employs him.

In 1888, Professor J. W. Langley, of Pittsburgh, called attention to the desirability of international standards for the analysis of iron and steel; and the result of the movement thus initiated was the general adoption of standard methods in the determination of carbon and other important elements in iron and steel.

It is the hope of the writer that a similarly desirable result may be obtained by a discussion of the methods for the assay of copper furnace material containing gold and silver.

In considering this question, we notice at the outset a divergence between the methods usually employed in the east and west of the United States. Most of the Eastern public assayers, as well as those employed by eastern smelting works, use what may be called a wet method, but is, strictly speaking, a combination method of assay. While there are many details incidental to different laboratories, this wet method may be outlined briefly as follows:—

FOR GOLD.—One assay ton of the copper borings or matte is transferred to a No. 5 beaker with a clock glass cover. The sample is treated with a mixture of 100 c.c. of water and 50 c.c. of nitric acid of sp. gr. 1.42. When the violent action has ceased, 50 c.c. more of the nitric acid is added, and the solution is gently heated until everything soluble has been dissolved. The contents of the beaker are then raised to the boiling point, the cover is removed, and boiling is continued until most of the free nitric acid has been expelled. The solution is then diluted with about 400 c.c. of water free from chlorine, 5 c.c. of concentrated sulphuric acid is added, and then 10 c.c. of a concentrated solution of either acetate or nitrate of lead. The dense white precipitate of lead sulphate carries down with it the minute particles of gold which may be suspended in the solution. The precipitate is then allowed to settle for some hours—over night, if possible. It is then filtered, washed once or twice with water, the beaker is carefully cleaned, and the filter and contents now practically free from copper are partially dried, wrapped in thin lead-foil, and transferred to scorifiers; enough test-lead is added to bring the total lead present up to 50 grammes, a pinch of borax glass is placed on top, and the scorification is conducted as usual. It is necessary to raise the temperature gradually until the paper has been consumed and the contents of the scorifier melted down. Cupellation is conducted in the usual manner.

This method is intended for the determination of gold; but enough silver will be present to allow the bead to be parted. When, however, considerable gold—say, 2 or 3 ounces per ton—is supposed to be present, it is well to add a drop of salt solution to the original nitric acid solution, to precipitate some of the silver along with the lead, or else to add a small amount of pure silver at the time of scorification. It is important not to precipitate all the silver, as, in that case, there might be an excess of salt which might liberate chlorine and vitiate the results as to gold.

FOR SILVER.—The usual method employed in the East for the assay of copper bars, mattes, ores, &c., containing silver is likewise modified in different laboratories. These modifications vary, as a rule, with the supposed richness in silver of the sample treated. The sample is dissolved in dilute nitric acid, as described in the above method for gold. To the solution, after the addition of sulphuric acid and before that of lead acetate, a solution of chloride of sodium is added in a sufficient quantity to throw down all the silver, the addition being gradual, and avoiding a great excess (as silver chloride is more or less soluble in sodium chloride solution); then the lead acetate is added, the solution is well stirred, and the mixed precipitate of lead sulphate and silver chloride is allowed to settle as in the gold determination. The rest of the process is conducted exactly as in the previous case for gold. Where any considerable amount of gold is present it is, of course, necessary to part the beads and deduct the weight of gold present, which otherwise would be weighed as silver, thus erroneously increasing the proportion of this metal. The gold obtained by this parting is usually less than the figures obtained by the special assay for gold, because some of

the gold is dissolved by chlorine through the excess of sodium chloride employed.

Some assayers determine the gold and silver at one operation by taking the filtrates from the gold and lead sulphate precipitate obtained as above described, precipitating the silver in this solution as chloride, adding more lead acetate, and after filtering combining the two filter papers, one containing the gold and the other the silver, and uniting them for one scorification and subsequent cupellation. This method is more economical for the assayer, and has the advantage also of two filtrations for gold, catching any fine particles which might pass through the first filter; but, on the other hand, it takes more time, because the same solution is twice settled. In the first method, the settling of the gold and silver precipitates goes on simultaneously.

In the West, the all-fire method is employed almost exclusively, so far as I can ascertain. In the Omaha and Grant Works, for example, 10 portions of sample, of 1-10th A. T. each, are weighed out and scorified with 50 grammes of test lead, one-half of which lead is mixed with the sample, and the remainder used to cover it in the scorifier. One gramme of borax is added. The lead buttons obtained by the scorification are cupelled separately, but the 10 beads are weighed together. The cupels are then ground up and fused in five lots of two each, with the following charge:—Litharge, 90; soda, 50; borax glass, 50; and argols 3 grammes. The five buttons are cupelled, and the silver is added to that obtained in the first operation, representing the loss in scorification. All the beads are then parted for gold, which is deducted from the total weight as usual.

My experience shows that the determination of gold obtained by this process is usually higher than where the wet process previously described is employed. It may be well to give certain instances in my own experience. On high grade copper bullion, which contains on an average about 400 ounces of silver per ton, the results were:—

Gold, ounces per ton		Fire assay		Combination wet and dry assay.	
..	..	1.06	0.92	1.24	0.20
"	"	1.32	1.24	0.20	
"	"	0.34	0.20		

In bullion containing 300 ounces of silver per ton:—

Gold, ounces per ton		Fire assay.		Combination wet and dry assay.	
..	..	4.06	3.96	2.76	2.44
"	"	2.76	2.76		
"	"	2.72	2.44		

In matte containing 60 per cent. of copper and 60 ounces of silver:—

Gold, ounces per ton		Fire assay.		Combination wet and dry assay.	
..	..	0.24	0.20		

The two processes usually agree very closely for silver, provided the cupel-absorption is determined, when the silver is assayed by the combination wet process. This cupel-absorption is very much less by the wet process than by the all-fire method, because by the former the copper has been eliminated, and is not present to help carry the silver into the cupel. In some instances, where substances are present which would cause volatilisation of silver in scorification, the wet assay gives higher figures, because the interfering substance has been removed by the acid.

The Western all-fire process for mattes is similar to that employed for bars, except that a second scorification is sometimes necessary before cupellation. The second scorification is usually performed in a small 2½ inch scorifier, enough test lead being added to the button obtained from the first scorification to make the lead present not less than 35 grammes.

The above descriptions, as will readily be seen, are in the baldest outline; and it must not be inferred by those interested that all precautions are not adopted to make the results correct; such, for instance, as igniting and dissolving any sulphur balls which may form when the matte or sulphuret ores are dissolved in acid, and adding the product to the main solution before precipitating the silver with the lead. This precaution is hardly necessary, however, as the very small amount of matte or ore held by the sulphur would be decomposed in the scorification.

Each of these methods in the hands of assayers, skilled in its application, will produce very uniform results, and yet, as will be seen from the few comparisons given above, any assayer running the two, side by side, will get divergent figures for gold.

The subject of determining gold and silver in copper furnace material has, of course, received careful attention from all assayers charged with such duties, and there are many excellent papers on this subject—notably, one by Professor Cabell Whitehead, Assayer to the Mint in Washington, which is published in Vol. VI. of the *Journal of Analytical Chemistry*, p. 262, &c. Professor Whitehead recommends a combination method, in which the silver is precipitated by sodium bromide instead of chloride, on account of the greater insolubility of silver bromide. He says, however, that in his experience it is better to precipitate the lead also as bromide, rather than sulphate. I will not give his method in detail, as the object of this paper is not to discuss the merits of various methods proposed, but to draw out suggestions from other assayers interested, as I am, in the adoption of a uniform standard method that will be as accurate as possible on the one hand, and will secure, on the other hand, the confidence of buyers and sellers, whether west or east of the Mississippi.

The problem is complicated at best, and especially so when mattes and ores are likely to contain zinc, arsenic, nickel, &c., as well as copper and iron.

Western practice has very naturally adopted the all-fire method as an outcome of the first requirements of lead-silver assaying before copper was produced to any great extent west of the Mississippi, or had become, as it is to-day, an important commercial vehicle for gold and silver.

The wet method, on the other hand, was naturally adopted in the East, where at first analytical chemists were infrequently called upon to assay materials containing the precious metals, but were in general employed rather upon chemicals, waters, iron ores, and other substances, to which a wet method only is applicable.

The difficulty, also, of getting correct results from mattes and ores containing zinc or other metal which tends to aid the volatilisation of silver has had much to do with the adoption of the wet method. This method is used by many of the copper refineries in Montana and other Western points, as well as in the East.

In my own laboratory we are constantly called upon to mediate between producers in the West and buyers in the East, or in Europe, and like all assayers, we stand between two fires; but, to the credit of the metal business, it is pleasant to record the fact that very rarely has anyone ever suggested to us that we should employ a method which would give higher or lower results than the actual amount of gold and silver present in the material assayed.

I have purposely refrained from stating the method employed in our own laboratory. This will be fully described at the proper time, in connection with the plan suggested below.

It is my hope that when satisfied as to accuracy the trade will recognise the desirability of applying to the assay of gold and silver the principles which now prevail in the copper trade

when assaying for the latter metal; that is, that the assayer shall be asked only how much total gold and silver are present, not how much he could produce by applying different methods of assay.

Whatever method is adopted, there are many incidental points which need to be considered, especially that of temperature in the furnace. It is always quite possible by any method to obtain very different results, if the cupellation is conducted at the maximum temperature, on the one hand, or at so low a temperature, on the other, as barely to escape freezing. Unless some standard precautions are taken to remove this difficulty, it will not be so much a question of cupel-absorption as of volatilisation. In the East, where gas furnaces are principally employed, it is, of course, much easier to maintain uniform temperatures in the furnace.

Without discussing the subject further in this preliminary paper, I venture to propose a plan of co-operative action for members of the Institute engaged in this business, with the view of arriving at an ultimate agreement upon a standard method. I am aware that the Institute as a body cannot officially endorse any particular theory, method or opinion. It is only a forum for free discussion. But its value as an organised medium for such an interchange of views and experiences as will result in substantial technical progress is unquestionable, and such an interchange is beyond doubt the necessary preliminary to any professional consensus of opinion, however authenticated.

As the first step in such a discussion, I would propose that a number of samples of a gold and silver-bearing copper material should be distributed to as many assayers as are willing to join in a "symposium;" each assayer to send his results, together with a minute description of the method employed, and of any circumstances possibly affecting the results announced, to the secretary of the Institute for publication without the names of the assayers or works. The results thus published could not be used to affect the commercial interests or the professional standing of anyone, and would be available as a basis for general, thorough, and really profitable discussion.

I wish, by this plan, to place myself upon an equal footing with all others who may co-operate in the proposed comparative test of methods, and have, therefore, suggested that the parties shall report to the secretary, and not to me. I will cheerfully undertake to prepare the necessary samples, and to furnish a description of the method of preparation.

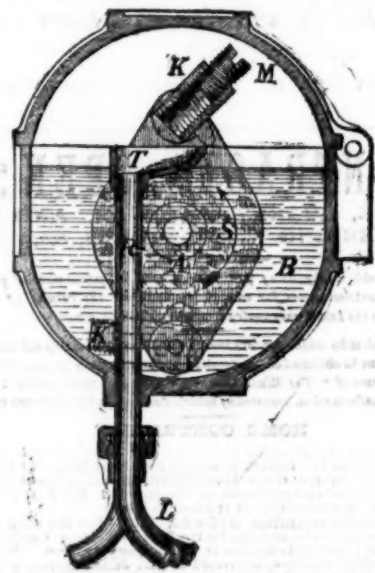
It gives me pleasure to announce that the Omaha and Grant Smelting and Refining Company, and the Baltimore Copper Smelting and Refining Company, have signified their willingness to participate in this undertaking, and I have no doubt that many others will be glad to lend their aid.

MECHANICAL ENGINEERING: MACHINERY, MINING and RAILWAY PLANT, &c.

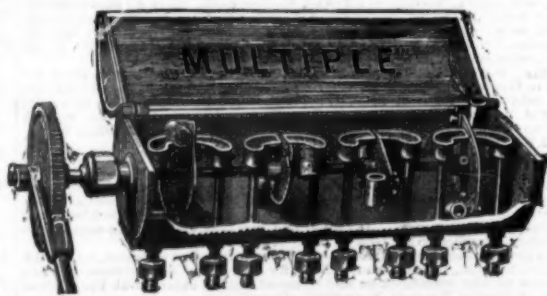
Illustrated Descriptions of New and Standard Mechanical Appliances, Accessories and Processes, adapted to Mining, Metallurgical, Railway, Engineering and other Industrial Purposes.

REID'S "MULTIPLE" LUBRICATOR.

THIS lubricator, which has attracted much attention, is manufactured by Messrs. William Reid and Co., of 112, Fenchurch Street, E.C., and 1, Akenside Hill, Newcastle-on-Tyne. The advantages claimed for it are:—Simplicity and



cheapness; feed pipes of small dimensions can be used; it can be cleaned without any trouble whatever; there are no working parts to wear out; constant and steady lubrication, and no expense for repairs; it requires little or no attention; the wear and tear of the bearings are reduced to a minimum; and it saves



50 to 75 per cent. in oil. In the section shown (B) is the oil box, through the bottom of which is placed a number of tubes (R). These tubes are provided with funnels (T), and connected outside with tubes to the different bearings. The oil is lifted to the funnel (T) by small cups (K), which are placed on the revolving plates (S). These plates are fastened to the axle (A) which passes through the oil box, and is connected to a ratchet wheel and lever to any moving part of the engine. In the course of revolving the cups empty the oil into the various oil pipes, and the quantity each cup supplies can be regulated by the screw (M), which forms the bottom of the cup. Each bearing can, therefore, be provided with the necessary quantity of oil required.

* A paper read at the Bridgeport meeting of the American Institute of Mining Engineers.

WEST AUSTRALIAN GOLD FIELDS.

The Big Blow Mine.—Interview with Mr. W. H. WEBB.
—Favourable opinions on the property.

It has long been known that a property was about to be put upon the London market, which, in the opinion of many both on this side and the Australian side of the water, had greater claims to the attention of the investor than others to which he has already been invited to subscribe. The name of this property is the Big Blow, situated close to Bayley's South No. 2, and contiguous to a range of hills which should give a good supply of water. This mine has attracted considerable attention in Australia, and from time to time during this year glowing reports and articles have been appearing in the Press. Indeed, so persistent have these latter been that when we heard of Mr. William Henry Webb's arrival in London we took the opportunity of asking his private opinion about it, which he gave us permission to publish if we thought fit.

As we know that any information respecting the Big Blow will be welcomed by our readers, and will be interesting from many points of view, we have "thought fit" to publish, in the form of an interview, the expressions of opinion to which Mr. Webb gave a tolerance. We might say, in introducing him, that this gentleman is well known throughout the whole of Australia, over nearly the whole of which he has travelled.

"How long have you been connected with Western Australia, Mr. Webb?"

"My commercial connection with the country has extended over 11 years; 18 months of which period I have lived continuously there. My knowledge of the Murchison was fairly extensive, though it was gathered simply as hearsay at Geraldton, the starting point thither, and I am sure that the Murchison is a very good field."

"But your principal acquaintance was with Coolgardie?"

"Yes; my connection with Coolgardie has been a very close one."

"Consequently you have been able to form a very definite opinion as to the permanency of the reefs?"

"My inspection of the district has included a large number of properties, and I am confident that in many cases, where the ore is reckoned to assay an average of from 1½ ounce to 2 ounces, the only thing required to make them successful is the establishment of a public crushing company. One has been started, I believe, since my departure, and machinery is being put up. Many of the mines have not been able to continue working in the past for want of capital. All that will be remedied in time."

"Which do you consider the principal mines in the district of which you are speaking?"

"There are the Big Blow, Bayley's No. 2 South, the Orient, Jenson and Hadfield lease, which joins Bayley's No. 2 South, where they have struck very good gold indeed. Then there is Tyndall's, which was formed into a company in Melbourne, and the ground has turned out very rich indeed. To the south there is the Londonderry, and there was a new find to the south-east—a very rich find, and, living near the spot, I saw hundreds of men going along the main road thither. All the claims south of the Bayley's Reward claim have shown good gold, ranging in assay from 1½ ounce to 10 ounces or 12 ounces to the ton."

"And at depth?"

"Down to 100 feet. Some have gone a little lower, but that is the general depth. Then the country is extremely rich in alluvial gold. All round the Big Blow there are men working at a sort of premature dry blowing. One gold dish is put on the ground, another is filled with dirt, and on a windy day the dirt is shaken about and allowed to drop on to the second dish, the wind blowing away the dirt and the gold remaining."

"The ground must be very rich?"

"Exceedingly so. Numbers of men are making very good livings in the neighbourhood of the Big Blow. My connection with Bayley's No. 2 South and the Big Blow has been from the commencement, and it is the opinion of the best authorities round the district that they are the best properties to be found in Coolgardie."

"More so than the Londonderry?"

"Well, when I left that had not been proved. Now the Big Blow has been conclusively tested. There are three blocks altogether, Nos. 35, 227, and 463. On block 35 there has been a great upheaval of quartz to a height at one place of 40 feet. It has been reckoned by measurement that there are more than 865,000 tons of stone there. Samples have been taken from every portion of it, and we have never got a prospect of less than 2½ ounces to the ton."

"Has there been much sinking?"

"A shaft has been put down on the side of the hill about 10 chains from the surface to the depth of about 100 feet, and it was never further than 6 feet from the lode. Opening out on the 100 feet level they struck the reef 6 feet from the shaft, and drove in over 30 feet without getting through the lode. Now, I believe, they are 38 feet in."

"Are there any specimens in England?"

"On my return to England I brought 23 cwts. of specimens taken from all parts of the property, down even to the 100 feet level. These were crushed by Messrs. Johnson, Matthey, and Co., and gave an average assay of 5 ounces 10 dwts. to the ton. We were very careful in the selection of this stone because we wanted accurate information, not only for the public, but for ourselves. Of course, there is a good deal of stone showing visible gold, but we wanted to get an average from the whole property so as to make a certainty of it."

"You have, in fact, prospected all parts of the Blow?"

"Thoroughly; and it is the opinion of those who have tested the stone personally that the whole of the upheaval put through the machinery will yield at least 2 ounces to the ton. A confident opinion has been expressed among the experts that without taking the stuff from the lower parts of the mine, the whole of the outcrop can be profitably put through the machinery—until the plain is level—while at the same time they can go on developing below."

"The 38 feet you mentioned was on the western side?"

"Precisely; then there is the eastern crosscut where they had driven 40 feet, and they had just struck the lode when I left. Since my arrival in England I have received letters from Coolgardie, in which they say that this ground is opening up very well indeed."

"As to water, Mr. Webb?"

"For that the property is fortunately situated. A sort of valley is formed by some hills upon the one side, giving a good catchment area. Already we have applied for two 5-acre water rights, and there is very little doubt that we shall get them."

"Is anything being done in the boring way?"

"A shaft is being put down, and they expect to strike water at 200 feet at the very outside. All around Coolgardie the holes of the Government have struck water at 140 feet. It is rather brackish, but for domestic purposes it can be condensed, and in its natural state it is quite good for machinery purposes, and for watering the animals. Within a quarter of a mile of the Big Blow and of Bayley's No. 2 South there is a natural catchment area between the hills, estimated by the Government water

surveyor to have a capacity, when the works of excavation are completed, of 17,000,000 gallons."

"On the water question, then, you are safe enough?"

"Perfectly. Beyond what I have already mentioned there are a couple of water dams belonging to the Government very near the property, each estimated to hold at least 500,000 gallons. I see by the daily paper that Mr. Maher, of Perth—an old friend of mine, by the way—has offered, if the Government will simply permit him, to run the water from the Swan River to Coolgardie—a fact which shows conclusively enough that there are many people who believe in the permanency of the Coolgardie gold field."

"As to that matter you are perfectly satisfied?"

"Beyond the shadow of a doubt. There are now enough mines opened up, and sufficient stuff in sight, to make Coolgardie a rich gold field for many years to come. Coolgardie and the Murchison are, as you know, in two opposite directions; but it is believed that the reefing district runs right through from one to the other. They are working in that way, and new finds are made every day."

"To recur for one moment to the Big Blow, how much sinking have you done altogether, may I ask?"

"Five or six shafts are down already, and it has been proved by costeaning from 5 to 8 feet deep right across the property. Three distinct reefs run right through the Central reef, all of which has been proved to be good, is 30 feet in width and 800 feet in length. The eastern reef is 60 feet in width and runs the whole length of the property. The western reef is of exactly the same dimensions."

"What is the main composition of the reef?"

"A sort of grey quartz interspersed with ironstone. At the 100 feet level the whole width of the drive has been proved to carry highly payable gold. So far the stone has been free milling, and no minerals have been met with to prevent the saving of the gold."

"Has any computation yet been made as to costs?"

"A careful reckoning has been made, but the result is so small as to appear ridiculous; we will add, however, a few shillings, so as to be fully on the safe side, and at the outside the cost of treating the ore, including labour and everything, may be put at 5s. a ton. What is called the open-cut system—the system worked with so much success by the Broken Hill Company—will be followed, and I may say there is enough stone in sight to keep 50 head of stamps fully occupied for five years."

"These are sanguine expectations."

"Wholly warrantable. How I wish you could pay a visit to the Blow, and have a chat with the manager; you would learn more in a few hours than I could tell you in three months."

"Perhaps the property has been examined by independent authorities?"

"Several unsolicited notices of the highest character have appeared in the West Australian papers. Allow me to read you one or two extracts. The *Coolgardie Miner* says: 'I think they have got a grip on one of the best things in the whole field.' And in a second notice: 'The lodes are of immense size on the outcrops. In places where they have been opened up they show fully 40 feet in width, and a nicer looking bit of stone it would be hard indeed to set eyes upon.' Again on April 21: 'It is estimated the whole of the huge mass of outcrops can be mined and crushed for the remarkably low average of 4 dwts. to the ton.'"

"Have any other papers noticed the property?"

"Oh yes; *West Australian* says: 'The mine is one of the biggest properties on the field, and with economical management promises to be one of the best paying mines in the district.' And then:—'In the drives all the lode carries gold in payable quantities, and occasionally exceedingly rich shoots are met with which bring the average value of the stone to a high figure.' Once more:—'The reefs have been traced for a distance of 800 feet or 900 feet along the surface, and the outcrop rises to a height of 50 feet or 60 feet above the surrounding country.' Then the *Daily News*, *West Australia*, states that 'the property possesses features distinctly unlike any other round about this portion of the Yilgarn gold fields, and affords a study alike for the practical, intelligent miner and the student of geology.' Another issue remarks:—'It is hardly fair to call this property a Big Blow, because in the sense in which the ordinary blow is understood it conveys but a very imperfect sense of its value. The mine consists of three vast upheavals of quartz reef formation, which have been forced up bodily with the hills surrounding them to a height of 50 feet above the plain, and from 30 to 40 feet above the smaller broken hills which enclose it on the south and west, and form an irregular group scattered about. The centre of these three bodies of reef formation rises right through the property for 832 feet, lying at an acute angle with the longitudinal direction of the block north and south, with a slight underlay to the east. . . . From this shaft about 200 tons of quartz for battery stone have been raised to the surface.'"

"About how far down is it proposed to carry the shafts?"

"Probably to about 200 feet before they open out. In the selection of specimens from the mine I chose them myself. I had a shot put into the Blow, and broke the stone away with a sledge hammer."

"Did all the quartz show gold?"

"Oh no; I remember a lot that I had purposed to throw away was taken by Mr. Bickhouse to test his new machine, and to the surprise of all, including the visitors who had assembled to witness the trial, it assayed about 12 or 13 ounces to the ton."

The pleasant smile with which Mr. Webb cast his mind back to this incident, reminded us of the many other claims upon his time during the short period of his stay in England. Accordingly we shook hands with him, and he departed with a few sentences that scornfully contrasted our own climate with the deep blue skies of Australia.

EXHIBITION OF BRITISH COLUMBIAN ORES.—The Board of Trade of British Columbia intends to establish an exhibit of specimens of ore in its rooms at Victoria. These rooms partake of the nature of a club, and are supplied with all the provincial and many other newspapers, and the public are allowed the privilege of using the rooms free. An exhibition of ores in such a place can hardly fail to attract the attention of the public and of capitalists to the districts whence the specimens come. Besides minerals, there will be specimens of lumber, rough and dressed, fish, fruit, and other products of the province.

AMERICAN PIG IRON PRODUCTION.—The existing plant in the United States, it is estimated, has a producing capacity of 17,000,000 tons of pig iron annually, or about three times the rate of production during the first half of the present year.

THE WELSH TIN PLATE INDUSTRY.—A Swansea telegram states that owing to continued depression and the low prices ruling in the Welsh tin plate trade, the masters are considering the question of reducing wages. The question is of so grave a character that the employers will not arrive at a definite decision for a few days.

BRITISH GUIANA AND VENEZUELA.—The *New York Herald's* correspondent at Panama states that Venezuelan forces have crossed the Cayari river, and have established a post on British Guiana territory, assuring the miners of protection. The English magistrate and the colonial police evacuated the district without offering resistance.

DRY CRUSHING MACHINERY.

(BY A CORRESPONDENT.)

THE uncertainty which still prevails as to the future water supply on some of the West Australian gold fields, in connection with the exceptionally rich character of the ore in some of the mines, will of necessity attract attention at the present time to dry crushing machinery. Of course there is nothing new in dry crushing of ores of gold and silver and other metals, but in the cases of ordinary treatment the disadvantages of dry crushing, in connection with the fact that the subsequent treatment is usually a wet one, has restricted the application of dry crushing to ores which require roasting or other subsequent dry treatment.

In the United States dry crushing machinery has been confined hitherto to stamps and rolls, although at the present time considerable success is attending the introduction of a form of Huntington mill, adapted for dry crushing, when fine grinding is required. Messrs. Fraser and Chalmers, who have manufactured very large quantities of machinery for dry crushing, particularly recommend the use of fast running rolls where the grinding has not to be carried to a fine state of division; as, for example, in the application of the chlorination and leaching processes to gold and silver. For such work, properly built rolls with forged steel shells are the most successful appliances yet introduced, for the reason that with comparatively small power and wear and tear they will give large capacity with a minimum production of dust, which otherwise would be a disadvantage to the leaching process. The extended application of the cyanide process to the treatment of gold ores will probably lead to the adoption of rolls in the treatment of ores to which all previous attempts to apply them have failed.

When the ore can be dry crushed by rolls there is no difficulty in subsequent leaching, while with wet crushing and comparatively coarse screens the experience has been that not more than 70 per cent. of the pulp from a stamp mill can be successfully treated by leaching.

With reference to some of the rich ores in Western Australia, in the absence of water, and owing to the fact that much of the gold is comparatively coarse, there will be no difficulty in devising plants for carrying out a fair commercial extraction of the gold by the dry process. Where some little water is obtainable the cyanide process can be applied for the extraction of the remaining fine gold, owing to the fact that the solution can be used over again with less loss and less consumption of wash water than on the pulp from stamps. It is quite certain that with the rich mines which exist in Western Australia the mere scarcity of water need not prevent profitable working, although in some cases it may be necessary to be satisfied with a lower extraction than obtainable elsewhere, but with preservation of the tailings for later treatment when in the course of development of the fields by sinking wells or bringing in water from long distances, the necessary water supply is obtained for perfect processes. Dry concentration of gold ores can, under the circumstances described, be used with success, and is, of course, already in a very crude form of application, yielding most important results. Certain favoured companies will obtain sufficient water doubtless in ordinary mining operations to keep small mills at work, and as things now appear in West Australia the ore is so rich that big mills are by no means essential to success. For companies working on a smaller scale, also mining, or with less favoured position as to water supply, dry crushing machinery will meet all present requirements.

REVIEWS.

ANOTHER WEST AUSTRALIAN HANDBOOK.

The Miners' Handbook and Investors' Guide to Western Australia. By Francis Hart. (Melbourne: McCarron, Bird and Co., 479, Collins-street.)

Western Australia does not boom now so loudly as it did, but the public still have their eyes and mind closely directed thither. In the handbook introduced to the investing world under the above heading will be found a full enumeration and concise description, illustrated and elucidated with maps and photographs of the colonial gold fields. Rapid and sketchy, but so far as can here be discovered, accurate and trustworthy, the narrative conveys the pith of the necessary information unencumbered by a recourse to needless elaboration or superfluous detail. Official reports are abundantly quoted in cases where such documents are available, and cover the requisite ground. An optimistic tone in regard to the colony is to be expected in a book of the kind; but the writer has preserved throughout a moderate and judicial style of criticism that will assuredly recommend the little volume to the ordinary reader. Investors and others interested in mining who may not have the time or inclination to wade through the scattered literature of the colony will find here a budget of useful information tersely put.

AN ADVENTUROUS LIFE.

A Strange Career. Life and Adventures of John Gladwyn Jebb. By his Widow; with an introduction by H. Rider Haggard. With portrait. (Edinburgh and London: William Blackwood and Sons.)

This narrative of the life and wanderings of a brave and high-minded sojourner in many lands possesses more of the interest of a tale of adventures than the sobriety of a biographical work. Mr. Jebb passed through so many narrow escapes that, according to the law of chances, hardly one-tenth of his career ought to have been an accomplished history. In India he escaped midnight assassination by three seconds. In the United States he was mistaken for game by one of the best shots in the Wild West, who sent a bullet within half a foot of him; while famine, blizzards, diphtheria, buffaloes, and fires conspired—always without success—to prove that he was not immortal. For nearly a year he lived among a gang of blacks in one of the swamps of South America, when he not only recovered from the yellow fever, avoided as if by a miracle all the advances of the wily snake, and other children of the forest, but out-generalised the unwelcome attentions of the coffee thieves. His Mexican life was equally venturesome and distinguished. Mr. Jebb walked serenely into the middle of the contending forces of the Government and rebellion, and came out unscathed. A spice of the supernatural has been given to the book, which to some minds will lend an additional fascination. By far the most pleasing feature in Mr. Jebb's character was his fearless honesty and unselfishness. A bearer of arms, he was never betrayed into an act of cruelty; a financier and miner, he was poorer at the close of his career than at its commencement; alone on guard over a huge treasure of silver, he coolly faced, single handed, a crowd of robbers rather than call Mr. Rider Haggard from sleep to his side. There was no use, he remarked, in both of them "handing in their checks." Shareholders in Mexican mines would do well to read the work, for they will obtain a vivid and interesting account of the conditions under which the industry is pursued there.

MEETINGS OF MINING COMPANIES.

GRAVEL GOLD MINES OF COLOMBIA.

Profits increasing.—The gravel becomes richer.

THE ordinary general meeting of the shareholders in the Gravel Gold Mines of Colombia was held on Tuesday, at Winchester House, Old Broad-street, under the presidency of Mr. J. T. P. PECHET.

Mr. S. A. COBBETT (the secretary) read the notice convening the meeting.

The CHAIRMAN said: I have now to move the adoption of the report and accounts. Of course, you will all readily understand why we have delayed calling this meeting, and why the accounts which we ask you to accept to-day have been spread over a period of 18 months instead of the customary year. You are all very well aware that these 18 months have been a period of very great trouble and difficulty to the company's mine. In the first place our superintendent, Mr. Griffith, whom I am very glad to see here to-day, and whom I am sure you will all very heartily welcome, he has had to contend against the difficulties which always arise in a mountainous country like that of Colombia, and owing to the new ditch, which is always liable to breakdowns in the tropical storms which occur. I am very glad to say that, so far as we can see, the ditch or aqueduct has at last settled down, and I don't think that we are likely to have any more real troubles in the mine owing to the breaking down of the ditch. Of course, the other question is the water question, and that is one about which I must not say very much. As you are aware, we are now at work again, and I do hope that we shall very soon be able to announce to you that this question, which has already, as we have understood it, been definitely settled three or four times, will really be settled at last, and that we shall have no more trouble on that score. I am quite sure of one thing, and it is a point on which I am sure Mr. Griffith will bear me out, that the question is one which the company can dispose of with very little expense and trouble if we are only met in a proper spirit on the opposite side. More than that I must not say, because every word said here goes to Colombia, and is there repeated, very often to our detriment. Now, as to the present position of the concern, I think we may all congratulate ourselves that we have at last got into smooth water. During the last 18 months, as you will see, instead of having washed, as we should have done, in that period for about 12,000 hours, owing to the breakdowns in the ditch and the water question, washing has only been carried on for a period of 5418 hours. That just represents a very large profit to us. If you turn to the accounts you will see that, after all, the total loss on the year has only been about £2000, and as our monthly cost is only a very little over £300, you will see, therefore, that it takes a very small return to give us a decent profit, and if we had been able during the year to wash during the whole time, as we ought to have done but for the breakdown in the ditch, we should have come before you to-day with a very satisfactory profit. The last run, received six weeks ago, gave a profit of £950. We received another one yesterday, but it came in just at the tail end of the dry season, when water was short, and the gross return on that run has been £550 and the profit £250, and that has been made with one monitor running with a 5 inch nozzle, instead of with two monitors with a 6 inch nozzle. That simply represents this, that if the mine had been running during that period on the ordinary scale, so far as the water is concerned, instead of having a profit of only £250 we should have had a profit of £1000. I do not think that anyone who has read the superintendent's report, and certainly none who have followed the work of this company during the past 18 months, can fail to see that we are now in this position, that so long as we have a continuous supply of water we can make a fair and reasonable profit, and all the time we are improving as we are washing into the banks. I have often told the shareholders of this and other companies that there are three conditions essential to the making of a hydraulic mine successful. The first is that there must be a large extent of auriferous gravel. What we possess is practically inexhaustible. Then there is the water supply. We also have that. We have a thoroughly good water supply, except occasionally when, as during last month, the water ran low in consequence of drought, and I must confess that throughout the world the climate seems to have been upset altogether, for here we are getting too much water, and there too little. At all events, however, the rainy season should have set in by this time. Then we want a good dump for our tailings. These tailings, when they leave our mine, have a fall of about 1000 feet into the Guall River, so there is no possibility of trouble in that direction. All these three conditions are necessary for the proper working of a hydraulic mine, and all these we possess. Of course, we have had difficulties to contend against, and one of our greatest has been the Rica syphon, which ought never to have been constructed. If, in the first instance, a ditch had been made, as Mr. Griffith has now done at very little cost, none of the troubles we have had to put up with would have befallen this company. I don't want to say any more about the mine, for I shall ask Mr. Griffith to say a few words about that directly. With reference to the accounts, very little need be said. You remember that at our last statutory meeting I told you that we were just entering on the career of this company, and I said we were raising £15,000, of which we wanted £5000 for the old liabilities, £5000 for contingent liabilities, and £5000 for working capital. So well have our resources been husbanded, and so well has the mine done, when all things are considered, that to-day the £5000 of working capital stands still at £3600; so that we stand in a thoroughly sound financial condition. There is no need whatever to make the remaining call of 6d. per share. We have made it a rule in this company not to call up any money unless it is absolutely necessary. I hope you are convinced by the returns you have had already from the mine that we are now entering on a profitable career, and I feel that, unless any unforeseen or exceptional circumstances arise, by the time that the next meeting comes round, this concern will have been placed on a dividend-paying basis. With these few words, I have to move: "That the directors' report and accounts to June 30, 1894, as circulated amongst the shareholders, be and are hereby received and adopted."

Mr. C. O. ROGERS seconded the motion, and said that during the last run, of which they had just received intelligence, there was not more than one-fourth of the water which they had had on the previous run, and, therefore, the results of that run were better proportionately than those of the previous run, and showed that as they got further into the gravel the richer it would become. They would remember that the Maravilla Mine was mentioned in the prospectus forming the company, and he might say that Mr. Russell had, at his request, inspected that property with the most satisfactory results. Everything requisite to make a hydraulic mine a success was there, and the result of seven different trial shafts was that the ground worked out at an average of over 12s. a square yard. After the settlement of the water question, which could hardly be long deferred, this mine might be very profitably worked.

Mr. WILLIAM ST. DAVID GRIFFITH, who was received with cheers, said: Gentlemen, I do not think I can add very much to what I have said in my annual report, which you will see was written only a few weeks ago. I consider the return from the mine, which was received yesterday, comparatively speaking, quite as good as the previous one, which left £950 profit, as during the run there has been very little water to wash with, owing to the exceptionally dry season. There are, as you have heard from the Chairman, three things required to make a hydraulic gravel mine a success:—1. Plenty of gravel with gold in it sufficient to pay; 2. Plenty of water to wash with; and 3. A good dump to get rid of the tailings. Now, in my report you will see I assure you that you have all these elements of success. The auriferous gravel on the estate is practically inexhaustible, and in ordinary seasons you have abundance of water—in fact, more than you can use, as the gravel in many places

is very soft. The dump into the Guall river is all that can be desired. The river runs about 1000 feet below the mine. You see I mention that up to now we have met with no defined channel such as they have in the Malpaso Mine. This does not prove that no such thing exists. On the contrary, it is my belief, from what I have seen of the deposit, that in the course of developing the mine we shall come upon some such channel. If we do, I need not tell you that our present good prospects will be even better. There is one other point I should like to say a word about. Since I have been at Rica I have devoted some little time to examining your extensive gravel deposit at Maravilla, and the more I have seen of it the more I am convinced that it is a most valuable mine. You are aware that as the mine falls into the Sabandija River we have not been able to do anything with it, owing to the water question, but I believe we are on the eve of the settlement of that trouble, and as soon as such takes place I shall be prepared to lay before the directors a plan for working the mine, and I am very sanguine that this property will eventually prove a most remunerative one to the company. (Cheers.) As you are aware, I came to England in June last, after spending five years at your mine. I return to Colombia next week; and I am quite confident that when I next have the honour of addressing you I shall be able to show you something of what your property can do. I shall now be happy to answer any questions that you wish to put to me, and to give you any information in my power as to your property. (Applause.)

Mr. WELLS asked what expenditure would be involved in working the new mine.

The CHAIRMAN replied about £2000.

The motion for the adoption of the report was then put and carried unanimously.

Resolutions re-electing the retiring directors—the Hon. F. C. Drummond and Mr. C. O. Rogers—and reappointing the auditor, Mr. E. A. Harvey, were unanimously passed.

The CHAIRMAN proposed a hearty vote of thanks to Mr. Griffith and the other officers of the company on the other side, which, having been cordially seconded by Mr. SANKEY, was unanimously adopted.

Mr. GRIFFITH having briefly returned thanks, the meeting terminated.

THE MONTANA MINING COMPANY, LIMITED.

An improved financial position.—The mine opening up well.

The fourth ordinary general meeting of the shareholders in the Montana Mining Company (Limited) was held on Wednesday, at Winchester House, the chair being occupied by Mr. THOMAS PHILLIPOTS.

The SECRETARY (Mr. C. J. Cooke) read the notice convening the meeting.

The CHAIRMAN, who was received with applause, said: Gentlemen, I presume it is your wish that the report be taken as read. We contemplated calling a *pro forma* meeting this month, and adjourning the same until Mr. E. T. Bayliss could attend, but in answer to a cablegram we sent him, he informed us that, if we deemed his presence at our half-yearly meeting to be absolutely necessary, he should be able to get to England some time during the month of November, but as his presence would, in the opinion of our solicitors, be required in Helena early in December, he should only be able to stay a few days in England. Under these circumstances we did not think it necessary to put him to the trouble and inconvenience of making such a journey, especially at this season of the year. (Hear, hear.) We, therefore, fixed the date of our half-yearly meeting within the prescribed limits of time specified in our Articles of Association, and sent out the usual notices. When we last had the pleasure of meeting you, the balance sheet for the year ending December 31, 1893, showed a loss on revenue account of £20,034 19s. 9d. The accounts for the half-year ending June 30, now presented, show a profit on revenue account for the half-year of £15,859 6s. 6d. You will recollect that it was pointed out to you at our last meeting that our main object in recommending the reconstruction of the company was to raise funds in order to enable us to fight the lawsuit and establish your title to the property; to repair and re-timber No. 1 shaft, which had been so seriously damaged by fire the previous year; and to enable us to vigorously extend our underground developments. For these and other objects incident to the proper maintenance and developments of the mine, calls were made to the extent of 1s. 6d. per share, which provided us with funds amounting to £49,281. Of this amount there remains unexpended £10,739 5s. 7d., which sum is credited to capital, and is not available for dividend. Considering the object for which the capital had been raised by reconstructing the company, we discussed the question, viz., whether the greater portion of the £20,034 debited to revenue the previous half-year might not legally be charged to capital, but after a consultation with the auditors and the solicitors of the company, they advised us that it could not be done. This amount must, therefore, be placed to capital account, and come out of profits before any dividend can be declared. Consequently the profits made during the half-year ending June 30 last, viz., £15,859 6s. 6d., have not only been absorbed in the reduction of the debt of £20,034 19s. 9d., but leaves £1475 13s. 3d. to be repaid to capital out of further revenue. During the first three months of the current half year our profits have been about £15,000. (Cheers.) This amount will be considerably increased by the end of December, when we confidently expect to be able to recommend the declaration of a dividend and to carry over a fair balance. There remained to the credit of capital account on September 30: 1. The balance of unexpended call money, £10,739 7s. 7d.; 2. The amount re-paid by revenue, £20,034 19s. 9d.; 3. Invested in stores about £9000; making a total of £39,774 5s. 4d. As the stores are consumed they are charged to revenue, and the amount thus invested in stores is therefore not a liquid asset. With this £9000 invested in stores we have to the credit of capital account the sum of £39,774, which may be regarded as a reserve capital. In addition to this sum of £39,774, the balance to the credit of revenue account on September 30, 1894, was about £10,739, making a total of over £50,000, after spending upon developments from January to September 30, 1894, £19,327. (Cheers.) I think, gentlemen, that you will appreciate the fact that at this moment our financial position is stronger and sounder than it has been at any previous period in the history of this company, and this reflection cannot but be gratifying to you all, but more especially to those shareholders who have so loyally supported the directors during the last three half-years of trouble and anxiety, and who have never lost faith in the management, or despaired of our being able to surmount the difficulties which have so long beset us. (Cheers.) With regard to the lawsuit now pending, I need not add anything to remarks made by Mr. Bayliss in his report. Our legal advisers are very hopeful that the decision will be in our favour, and you will, I am sure, agree with me that, under existing circumstances, any discussion on this subject had better be avoided. (Hear, hear.) I shall leave it to Mr. Crowther to give you some interesting details relating to the underground developments, and now beg to move "That the report of the directors and the accounts as presented be adopted." (Loud cheers.)

Mr. F. P. CROWTHER said: Before proceeding to give you the detailed information regarding the mine, there is a paragraph in the circular of the 12th October, that I should like to direct your attention to for a few moments. In reference to this subject I desire to say, do not be surprised or disappointed if the monthly profits for October to March are somewhat reduced in volume, for as Mr. Bayliss, in the circular of the 12th October, informed you, it is a wiser policy to husband our strength and resources until we are in possession of the knowledge to be derived from the six months developments. Our reserves of ore have doubtless increased rapidly in spite of our having sent over 50,000 tons to the mills since the 1st of January this year, and our information is that we have larger reserves of ore unbroken than we have had for several years past, but we feel, guided by past experience,

that we cannot fulfil the part of a spendthrift, but rather err on the side of extra caution, for if experience in the past teaches anything, it is that we must, if possible, keep the mine well ahead of the mills if we are to escape quicksands. I will now take the main points relating to the mine in detail, and will commence with No. 1 shaft. The re-timbering has been completed fully a month or six weeks ago to the bottom or 1600 feet level, and the work of driving prospect crosscuts into the hanging and footwall country has made some progress in both directions, and will be pushed with vigour a considerable distance, especially that to the east, in order to discover the New Castletown vein at this horizon. This shaft will early next year be equipped with a Reider pump sufficiently powerful to lift the water at one lift to the 400 feet level, and thus do away with the present series of small pumps, which are very costly to work. The saving in working expenses of the new pump will pay for its entire cost in about 18 months. This shaft will now prove to be a very great assistance to us in the deeper developments which are being and which will shortly be made on the Drumlummon, New, Old Castletown, and North Star Mines. Two very important discoveries have been made already—the one in the 700 feet level on the Drumlummon vein, and the other in the 500 level on the Old Castletown vein. I will explain them in some detail. In the 700 feet level on the Drumlummon we have discovered the No. 4 Pixley ore shoot, which gave us such a large and productive tonnage in and above the 400 feet level. Mr. Bayliss referred to this discovery at the last general meeting in these words—"A recent cable states that they encountered an ore body, which they believe to be the one they are looking for, and it is yielding a good grade of ore." In the circular of the 17th of August further mention is made of it as follows:—"The north drift in the 700 feet level has entered the Pixley No. 4 orebody for a distance of 53 feet; it is about 12 feet wide and of good average grade," and in the circular of the 12th of October it is stated to be 60 feet in length, and that the drift shows pay ore in the north end, and as the hanging wall is not exposed the width of the ore cannot yet be determined. The ore may be classed as good grade. The finding of this ore body is very likely to lead to the further discovery of the Pixley 3 at this level, and very important discoveries they would be, pregnant with meaning and results. Should they be found to continue to the deep, I believe that the chances of finding them are so good that the search should be, and doubtless will be, vigorously pressed—as opportunity for doing so offers—for it must be remembered that as development work must be charged to revenue account we cannot press it beyond certain fixed limits of expenditure, but it will come in due time. I will now refer to the development made at the 500 feet level on the Old Castletown lode. When I was at the mine last October Mr. Goodale, Mr. Burrell, and myself carefully considered the question of where we could do some prospecting that would be likely to give us an early supply of ore of good grade for the 50 stamp mill—of which at that time we were very short. We finally fixed upon this point as the best to attack, and it was decided that a drill should be put to work here as soon as we had one available. In November the discovery of the New Castletown was made, and every available drill we could afford to work was employed to open up the new discovery at various levels, and so the work on the Old Castletown in the 500 had to be postponed. In June this year work was commenced, and has resulted most satisfactorily. An ore body 150 feet in length by 12 feet in width has been discovered, and where the Old and New Castletown veins unite, at the north end it is of great width and of high grade. Mill tests of several hundred tons have proved the value of the entire ore body to be not less than \$20 per ton. Mr. Bayliss closes his remarks regarding this ore body in the following words:—"It seems reasonable to expect that an ore shoot of such strength and magnitude will be encountered still farther in depth," and I feel sure he will find few who know the mine who will not heartily agree with him. There are many other points in the north end of the mine that promise good results when they are attacked, but I cannot attempt to deal with them to-day. I will now turn to the workings on the New Castletown lode, which has in one short year turned the "Winter of our discontent" into a springtime full of hope, to be followed in due time by a harvest home full of fruit. I speak feelingly, for no one has understood better than my colleagues and myself, who had our reputations and credit at stake, what the redemption of this property means, especially to those who have formed the working crew. We have hoped when to some it may have seemed like hoping against hope; we have worked when most men would have dropped their tools and quit to seek fresh fields of labour; we have struggled against fire that caused the closing down of our main workings for many long and weary months, against floods that destroyed our tailing dams, against lawsuits involving heavy expenditure of money and time, that were vital in the interests involved, carried on in a manner and spirit that was hard to endure, and yet, through it all, we have met you time after time, encouraging you to keep up your courage, strong in the hope that, fortunately for you and for ourselves, nothing could quench. You can, therefore, understand why we press upon you in detail the nature and value of the developments, so that you may understand them, value them at their true worth, and wait patiently for the reward that is only for the diligent, plodding, courageous waiter. Never were words more full of truth than those of a great man who has passed from our midst—"Everything comes to the man that can wait."—New Castletown No. 3 level: We have an ore body 220 feet in length and of an average width of 8 feet, value \$15 to \$20 per ton. Drifting south about 100 feet we discovered a second ore body which has been proved 152 feet in length, 13 to 14 feet wide, the value of which is about \$25 per ton, so that we have a run of ore in this level proved for a distance of 372 feet averaging 10 to 12 feet wide, and about \$20 per ton throughout. In the fourth level we have the same run of ore shoots in course of development. In the circular of the 12th October you will find it stated that the south ore body has been under cut 50 feet, but as both faces of the drift are in ore, the total length remains to be determined. The width is given as 9 feet, but neither wall is visible; the value is given as fully equal to that in No. 3 level, \$25 per ton. Since that information was sent to you further details have come to hand, and they are as follows:—New Castletown No. 4: The ore body is at present 12 feet wide without any definite footwall having been encountered. It is also showing great improvement in value, and will probably average \$30 to \$35 per ton at least. The drift is now being continued south 6 feet wide in ore without any footwall being apparent, and samples, \$24 in gold and 28 ounces in silver, to over \$40 per ton.—The New Castletown No. 5 level. The south drift has also encountered this ore body, which to date has been undercut 78 feet, the average width of ore exposed being 4 feet, but as the footwall has not yet been found, the width cannot be accurately stated. The average value per ton is somewhat higher than in the 400 feet level—\$25 was the figure then given. In the north end a new ore body has been encountered at the junction of the New and Old Castletown lodes, which has been undercut 27 feet and is 4 feet wide, and is of good grade—further and later details are to hand as follows:—The south drift is still being advanced in the south ore body, which in this level is now considerably over 100 feet in length, the face still continues to show high grade ore, the width remains to be proved. Mr. Bayliss cabled on the 29th that this drift south has opened up a fine body of ore to date, sample running \$40 per ton, and to-day's \$33 per ton. In the 600 level the orebody has been proved to be of greater length than in any of the levels above, and in size and value compares most favourably, and is of higher value. The south drift is now being pushed ahead to discover the south orebody, which has recently been opened out in the 500 feet level. The 700 feet level work is not so far advanced. We have already opened on ore for 62 feet in length, 4 feet wide, and of high grade in value. In the 800 feet level very little work has been done up to the present time. We are upraising to the 700 feet, and are up 60 feet with our raise, which is now in high grade ore very similar to that met with in the 700 feet level. There is one point that stands out prominently in connection with the above most satisfactory developments that I cannot dismiss from my mind, and which I shall be failing in my duty to you if I did not mention, and it is this.—the 500, 600, 700, and 800 levels on the New Castletown, which con-

large and important deposits of ore of good to high grade quality, and those in the 500 feet level on the Old Castletown as well as those to the north end of the 700 feet level on the Drumlummon, are all below the point in the Drumlummon lode where impoverishment took place, and to my mind this fact is pregnant with meaning and full of promise for the future, especially so far as the New Castletown vein is concerned. Taking the year's work commencing last November, as a whole, it has resulted in very important discoveries of ore of good to high grade, such as we have not experienced for several years past, and a new era of prosperity appears to have commenced, the results of which, at this stage, it is difficult to estimate to their full worth, but sufficient has been already manifested to encourage and satisfy every reasonable minded shareholder to wait with patience and hope the results of future developments. When I last addressed you in December, 1893, immediately after visiting the mine, I told you that the "pointers" were all in the right direction, and the future full of encouragement, that the underground work was in the hands of good and capable men, and you now have before you some results of their earnest toil and careful watchfulness on your behalf. I am quite sure that you will send them your well earned thanks to encourage and stimulate them to greater efforts in the future. You will all rejoice with me that this has occurred during Mr. Bayliss' third term of management of our property, whose zeal and attention to the interests of the company is in every way beyond praise.

The motion for the adoption of the report and accounts was then put and carried unanimously.

On the motion of the CHAIRMAN, seconded by Mr. JOHN DARTINGTON, a resolution of thanks to Mr. Bayliss and the staff was carried unanimously, and the proceedings terminated with a vote of thanks to the Chairman, proposed by Mr. REID, and carried by acclamation.

VICTORIA AND ALTAMIRA, LIMITED.

Some unexpectedly good statements from the chair.

A general meeting of this company was held at Broad-street-avenue on Tuesday, Mr. T. HORSEFALL WATSON (Chairman) presiding.

The SECRETARY (Mr. Robert Larchin) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen, You are aware that some time ago we decided to call you together once in six months. We have done that already at the end of one six months, and we are now doing so at the end of a second; but I was hopeful we might have something to present to you to-day a little further in advance than we have actually got. At the same time, I think, from what I shall put before you, you will find that we have made considerable progress since we last met. Had it not been for our promise to call you together at this time, I should almost have preferred to delay this meeting until the accounts were prepared and ready to present. We have no accounts to present to-day; but the books are now in hand, and will be made up to the end of the year, so that in due time you will have these accounts laid before you, and, so far as I can judge, I think you will find them fairly satisfactory. In regard to the progress of the mine, from the reports you have received you will see that we are taking a decided forward step. These reports must have been somewhat cheering, as compared with those that have been put before you for some time. I think it right to repeat here what I told you at the last meeting—that the liability which we had hanging over us at home has been fully discharged. We do not owe a shilling to the men who were tormenting us and threatening our destruction, and we are entirely free. (Hear, hear.) We have had a little difficulty in ascertaining what our liabilities were on the other side. We have had men there who were appointed before my day, and whom, perhaps, we ought to have disbanded long ago, but we hardly saw our way to doing so. We were a great deal in debt to our secretary out there (Mr. Lewis), and could not ascertain exactly what we did owe him; but now every liability has been paid off, so that to-day, both at home and abroad, we can look on ourselves as entirely out of debt, which, I think, is a position we have reason to congratulate ourselves upon. When we left, Mr. Broc, of whom I cannot speak too highly, remained in charge; but he felt, and we agreed with him in the opinion that he was too young a man to have the entire charge of the place, and accordingly we looked about for a man of greater experience as our manager. At our request Mr. Broc sent over a plan of the mine, for we had never had one on which we could rely before. He made a survey of the property, and has given us a plan which would do credit to any engineer at home. Your directors were never placed in a more anxious position than when we were selecting a manager to send out. We had made one mistake, and were afraid of making a second; if we had done so we might have been simply ruining our mine. But we found in Mr. Ernest Santelli a man who is, to use a common expression, the right man in the right place. We made every inquiry in regard to him. He had a 12 years' record, not only in mining ability, but for general high character, and mining men and others spoke in the highest terms of him. We could not have anything more encouraging than the way in which the British Consul at Cagliari spoke of him. He met Mr. Broc—who refers in high terms to him—and the two seem to be working hand-in-hand in the interests of the undertaking. He has been in no hurry to start new works, first making a thorough inspection of the property, not only in regard to its mineral value, but with reference to the manner in which it ought to be worked to the best advantage. He has satisfied himself as to the high quality of the ground, and assures us, from the samples he has tested, that on the lowest estimate there is 1½ ounce of gold to the ton of quartz. We know from mining experience that as we go further down the ore becomes richer, and can only hope it will be so in this case. But, taking the ore at 1½ ounce to the ton, the time cannot be far distant when we shall be paying as good dividends as any companies working in that country. Mr. Santelli has driven in his level close to where the stamps are placed, so that he will not have anything like the distance to drive to reach the lode which Captain Nicholls would have had from the pumping shaft. I think Mr. Santelli, in the mode of driving he has adopted, has shown himself to be a thoroughly practical man. He is going forward, and expects in his driving not only to cut the lode, but to cut it at within a trifle of the junction of another lode; and driving along that again—making the work pay for itself the while, and something more—he expects to come to another junction, and to have a meeting of no fewer than five lodes before he has driven very far. It will not surprise me to hear by the next mail that he has cut the lode and tested some samples from it. When he has done so I expect he will bring out as much quartz as will keep our 20 stamps going. We have had those stamps on the ground, but never had anything for them to do; but it is a consolation to us to know that they are in such a condition that they will be available as soon as we are ready. The 20 stamps are capable of crushing 2 tons per stamp per day; ½ ounce will more than pay all the expenses both at home and abroad, and at 1½ ounces per ton we shall have 1 ounce clear profit, which taking 40 tons a day, with 26 days per month, would give us 22½ per cent. dividend; but in making our calculation we have put it, not at 2 tons, but at 1 ton 10 cwt. which, if the stamps are kept fully at work, would leave us 17½ per cent. on both the preference and ordinary shares. (Hear, hear.) Referring to the ordinary shares, some of you know there have lately been a number of them put on the market. These belonged to the City Stock Exchange, which is in liquidation, and with the recent reports we have had from the mines they have seen it worth their while to put these shares on the market. Some of them have sold as low as 6½d., and other prices have been 8d., 9d., and 10d. They have seen their chance of making a little profit, and I hope some of our other shareholders have seen their way to take the shares up, because, although the preference shares stand in front of them, as soon as ever we get above 10 per cent,

they will stand on a par with us. Some shareholders have thought the preference shares only take 10 per cent., and that the ordinary shares will take the balance, whatever it is; but that is not so. After 10 per cent. is paid to the preference shares, anything in addition is equally divided among the shares of both classes. (Hear, hear.) I hope before we next see you we shall be able, if not to declare a dividend of 22 or 17½ per cent., at least to declare a dividend, and that is a position we have never yet reached. However, we are making progress at the mine, we are clear of all our debts, and stand as well in that respect as any company could stand; but we want the shareholders to try and help us by meeting their calls as punctually as possible. If the calls are promptly paid we can put on a larger staff and assure returns at an earlier date. In conclusion, the Chairman said he would ask Captain Edwards, who had been out to the mines, to say a word or two. Captain Edwards, who was spoken very highly of by Mr. Broc, had come home because he was in bad health; but it was the board's intention to send him out again when he had recovered.

Captain EDWARDS said he was sure the company had a very rich property. Mr. Santelli was the best man he had seen on the mine since he had been there. The man who made the mine pay would make a name for himself, and he should like to have a share in the credit of working it. He had had 17 years' experience of gold mining, and he was convinced they had a rich mine.

Mr. J. ORLANDO LAW remarked that the directors had met the shareholders from time to time empty handed, and he was sure that it could be satisfactory to neither of them. The directors had spared no pains or time in working earnestly for the success of the undertaking. They had spent the small sums at their disposal in a judicious manner. They possessed free and untrammelled the best mine in the country. The greatest proof of the value of the mine was that several attempts had been made here and in Bolivar to get hold of it. He hoped that at no distant date they would reap the golden harvest they had been expecting so long. Directly he lost confidence in the mine he should resign his seat on the board.

Mr. HALLETT said he had been on the property, and had brought specimens home. He was certain they had a property of great value, and must congratulate his fellow-shareholders on having got rid of Captain Nicholls. In Mr. Santelli they had a man who would get the gold out of the mine. He had already gone the right way to work to get at it. (Applause.) He (the speaker) bought his shares at a high price, but he did so and held them still because of his confidence in the property. He had also put many of his friends into the undertaking.

The CHAIRMAN, in reply to several shareholders, said that most of the calls had been paid up, but there was still one or two considerable amounts outstanding. The exact amount due in calls owing and not yet made was £4000. The authorised capital was £200,000, in 6,000,000 10 per cent. preference shares of 200,000 ordinary shares of 5s. each.

On the motion of Mr. GRACE a hearty vote of thanks was accorded the Chairman.

NEW QUEEN GOLD MINING COMPANY, LIMITED.

Further sinking of No. 2 shaft decided upon.

The fifth annual general meeting of this company was held at Winchester House, on Wednesday, Mr. ROBERT MILBURN (Chairman) presiding.

The SECRETARY (Mr. J. Durie Pattullo) having read the notice convening the meeting,

The CHAIRMAN, in moving the adoption of the report, said they were holding their meeting about a fortnight later than usual, for reasons which he would explain. Some time previous to the current month their crushings had shown very poor returns of gold, but in the middle of last month their managers informed them that they expected to find a considerable improvement after the end of that month. They, therefore, thought it would be interesting to the shareholders to know whether these anticipations were being realised, and they consequently delayed the meeting for a fortnight. They, no doubt, had seen that they had one crushing on the 13th, and that that yielded the far more satisfactory return of 1 ounce 12 dwts. 19 grains from the No. 1 formation. They had also received another crushing on the day before yesterday, which had returned 1 ounce 7½ dwts. That was not so satisfactory as the previous one, but it shows a very marked improvement over the yield for August and September, and, therefore, they had reason to hope that they were once more getting into richer ground. The report also contained a tabulated statement showing their crushings from July, 1893, to about a fortnight ago, which had been prepared in order that the shareholders might thoroughly understand the position at the mine. The directors made it a practice to publish fortnightly the cable announcements of the result of the crushings in the newspapers, whether they were good, bad, or indifferent, in order that the shareholders should have every opportunity of watching the progress of the company. The directors were most anxious to be in perfect accord with the shareholders, and they would most willingly give them any information they desired about the company if they would call at the office. They had during the year under review crushed 6929 tons, as against 7337 tons last year, which was a decrease of 408 tons. They were a little disappointed at that falling off, because the managers told them that they expected the output would be greater; but, on the other hand, the percentage of gold had increased from 1 ounce 5 dwts. to 1 ounce 17 dwts. 3 grains, or considerably more than ½ ounce per ton. He was quite aware that the richer crushings were made during the first half of the year; but, of course, the board could not be made responsible for the stone itself. Their gold had realised 8d. per ounce more than the price obtained in the previous 12 months. The quantity of stone crushed for the public at the company's mill had been about the same as last year—namely, 7361 tons, which produced £3977. Their battery was kept in the highest state of repair, and he thought he might say there was no better plant than that which they possessed in Charters Towers. It was generally acknowledged that excellent crushings were obtained from the stone sent to their battery by the public. The directors wished they could employ the whole of their 25 stamps for their own stone, but that, for obvious reasons, they could not do. He thought it was necessary that the shareholders should understand why their mine was expensive to work. The fact was that their formation was very wide, and their reef very small and the ground very hard. Consequently, in getting out the small amount of ore that they actually crushed they had to remove a very large quantity of ground. They would notice from their manager's report that in some places as much as 20 tons of mallock had to be broken in order to obtain 1 ton of ore, therefore, unless they got a wider reef, they must expect the expenses of working the mine to be heavy. Referring to the falling off in the value of the stone since July 1, he said that the average yield of gold was very much less than it had been for some considerable time; but, on the other hand, they must expect alternations of richness and poorness. They were at the present time working on several points where they hoped to meet with very considerable quantities of good ore. It was perfectly true that in the No. 1 formation they had worked out a lot of ground, but, on the other hand, a considerable portion remained, and they hoped it would return them a good quantity of gold. There was one particular part, adjoining a neighbouring mine, where the reef came from their ground into that of the New Queen, but they were unable to locate it exactly in their own ground. They had, therefore, considered it advisable to try and get permission to work it from the neighbouring property, and the necessary consent had been obtained, and the directors expected very shortly to hear that the stone was following into the ground of the New Queen, and producing as good results as it had done in their neighbour's ground. If this proved to be the case it would make a considerable difference to their returns. They were now also working on what was called the No. 4 formation, and in a letter received two days previously from their managers it was stated that they expected to get a much larger quantity of stone than hitherto from that development, because it

had now been well pushed forward. They also expected that it would show a very much better return in the precious metal. With regard to the No. 2 shaft, it had now been sunk to a depth of 1027 feet. They had hoped that they would reach the Brilliant Reef, which had been so rich in some of the neighbouring properties, but after sinking some distance they failed to do so, and, therefore, stopped operations there. He thought it would be very desirable in the present state of the mine, and inasmuch as they had got money in hand, to continue operations on the No. 2 shaft, with a view, if possible, to cutting the Brilliant Reef, which would be so very important to the life of the company. Mr. Robinson, who visited the mine last year, anticipated that if they sank another 100 feet they would probably reach the reef; but, in any case, he thought it was well worth expending a little money upon it. He wished, however, to tell the shareholders that if the directors spent money on developing and prospecting for further reefs it must necessarily be at the expense of their dividends. The board would be able in a very short time to pay another dividend (because they had plenty of gold coming over) were it not for that reason; but, considering the number of reefs converging into their property, he thought it would be a great pity not to develop the mine for fresh workings. (Applause.) Assuming, therefore, that the shareholders were satisfied with that policy, they would devote some portion of the money in hand to that purpose. If the next three or four crushings were as good as the directors hoped they would be, then they might even be able to carry on these developments and still pay the shareholders a dividend. During the past year the company had paid four 6d. dividends, making £15,891 paid out of the year's income. The net profits amounted to £19,318, and under the Articles of Association the directors were entitled to 5 per cent. on that amount. In the old company the remuneration of the board was £1500 per annum; but after the reconstruction it was arranged that it should be reduced to £750, and that any further remuneration should be dependent on the shareholders receiving at least 10 per cent. out of the profits in a particular year. Hitherto they had not been in the fortunate position of being able to pay 10 per cent. Therefore, the director's were entitled to 5 per cent. on the profits of the year; but, bearing in mind the fact that the reefs had been showing poorly lately, they had come to the conclusion that, instead of taking the amount to which they were entitled, they would only take one-half. (Applause.) He thought they should record their appreciation of the services of their managers, Messrs. Miles and Company. They had most carefully worked the property, and the directors were in every way satisfied with them. The shareholders would see by the profit and loss account that the item of wages was extremely high. They had no labour which cost less than 10s. per day, and while the present scale of wages in Charters Towers was maintained they found that they were unable to do anything to cheapen it. The mine and general expenditure this year was £21,300, as against £20,800 last year, while the mill expenditure was £9400, as against £10,800. Taking the two items together, the expenditure was about the same as that of last year. They had spent about £1000 in maintaining the plant, which was all in excellent order—in fact, it had never been in better condition than it was at the present moment. Gold to the amount of £7000 was sold at Charters Towers, and the remainder, to the amount of £30,480, was sold in London, so that their total receipts from gold were £37,480, as against £29,927 last year. They received a much better price by having the gold sent to this country, and, therefore, they almost invariably adopted that course. Altogether, he thought the directors were taking all reasonable steps, not only to have the mine developed to its best extent, but also to save as much expense as possible. (Applause.)

Mr. WALLACE seconded the motion.

Mr. HANCOCK asked the Chairman to give the shareholders the figures showing how the surplus remuneration worked out.

Mr. BUTCHER said he would like to see the mine developed. He thought it was a mistake to declare dividends spasmodically; and that the value of the shares would be increased by the declaration of regular dividends.

The CHAIRMAN, in reply, stated that the profits for the year amounted to £19,318, and the directors' proportion of that, 5 per cent., would amount to £960; but, as they only proposed to take 2½ per cent., the proportion would be £480. It had been suggested that they should write off something for depreciation of plant, but he maintained that the plant was in as good a condition as, if not better than, when it was put down. The board were perfectly willing to write off a certain amount for depreciation if the shareholders approved of that course. With regard to paying dividends regularly, if that were done the board would have to keep back a large balance for contingencies, and he thought that was not desirable. (Hear, hear.)

Mr. ROSS ROBINSON said one shareholder had suggested that it might be better to engage a private individual to manage their mine rather than Messrs. Miles and Co., because these gentlemen had many other properties to look after in Charters Towers. It was true that these gentlemen had a great many mining properties to look after; but they had trained a very large staff. He knew most of the mining managers in Charters Towers, but he would be very sorry to see their property managed by any one else. With regard to the mine, he considered the outlook very hopeful. At the last meeting he predicted that the results this year would improve, and that had turned out to be correct. Unfortunately, there was a falling off at present, but that was to be expected in a mining venture. He then referred to the Brilliant Reef, which had produced a good many fortunes for the people in Charters Towers, and stated that they expected to find that reef in the New Queen.

The motion was then put and carried unanimously.

The retiring director (Mr. T. Eley Sykes) and the auditors (Messrs. Monkhouse, Goddard and Co.) were re-elected.

A vote of thanks to the Chairman closed the meeting.

GUADALCAZAR QUICKSILVER MINES, LIMITED.

The richest quicksilver mine, except one, in the world.—The manager highly praised.

The fourth annual (ordinary) general meeting of this company was held at Cannon-street Hotel, on Wednesday, Mr. WILLIAM FURBER presiding.

The SECRETARY (Mr. W. H. Salmon) having read the notice convening the meeting,

The CHAIRMAN, in moving the adoption of the report, said he had been obliged to take three months' rest, and during his absence Mr. Percy Furber had taken his place on the board, and had been credited with the fees that would have accrued to him (the Chairman). On his (Mr. William Furber) return, Mr. Percy Furber had resigned his seat and was sailing for the mines on Saturday. The board was, therefore, constituted as before his going away. Turning to the report, the company had at last been duly registered under Mexican laws. He did not think it was necessary to go much into the report, as it had been sent out to the shareholders in order that they might be able to study it at their leisure. Mr. Merrylees' report went into the present position, and, to a certain extent, the future prospects of the company. He must, however, remark on the excellent manner in which Mr. Merrylees had conducted the business. The year had been one of considerable anxiety. Mr. Merrylees had shown himself "the master mind," as Colonel Gordon had said in his speech last year. He must fully endorse Colonel Gordon's words at the last meeting. He desired to emphasise them in the fullest manner possible. (Hear, hear.) He could not say that, at the outset, Mr. Merrylees had the full confidence of the board. Now, however, everything had been cleared up. Every report the manager wrote, the manner in which he had overcome difficulties, the activity he had displayed, showed that he had the interest of the mine at heart, and he (the Chairman) could say unhesitatingly that Mr. Merrylees had the full confidence of the board. (Hear, hear.) As to the debenture holders, the property would have been

taken over by them. The debenture holders had, however, agreed to the creation of £25,000 first mortgage debenture, bearing interest at the rate of 10 per cent. per annum, payable half-yearly, and redeemable on the 30th June, 1899, with a bonus of 15 per cent. The original debenture bonds had now been exchanged for the new debenture stock, which absorbed £17,250, and left £7,750 to be issued. This exchange had only cost the company £250, exclusive of the necessary legal charges. Prior to this arrangement, when further capital at the mines was needed, which the directors had not at their disposal, Mr. Merrylees had arranged for an advance, on his personal security and responsibility alone, of £25,000, and by this means was able to go on with the development work at the mines. He thought they would agree with him that it showed that their manager had a deep interest in the property. The quantity of ore extracted from the mines during the year amounted to 4095 tons, from which there was recovered 2.45 per cent. of mercury, equal to 199,136 lbs. of mercury, which showed an increase of 23,861 lbs. over the former year's production. That showed their property to be, with one exception, the richest quicksilver-producing mine in the world. Their ore gave 1 per cent. quicksilver, the ore at Almaden in Spain 8-9 per cent., that from Idria in Austria 73 per cent., and the Russian mines 1½ per cent. As far as he knew, no mine, except Almaden, was richer. The important question of water supply had now been practically solved by the construction of rain water tanks, which when finished would give a total capacity of 675,800 gallons. He regretted that in consequence of some details not having been received from the mines, they were unable to present the accounts at that meeting, but they hoped to be able to circulate them, duly audited, among the shareholders at an adjourned meeting in about two months' time.

Mr. H. FURZE said he had much pleasure in seconding the motion. He should like to confirm all that had been said in regard to Mr. Merrylees. He was one of those who had opposed Mr. Merrylees' appointment. He took the opportunity of saying how pleased they had been to have Mr. Percy Furber on the board, during their Chairman's absence.

In reply to questions, the CHAIRMAN said he did not think they would receive the accounts in less than two months. Mr. Percy Furber was taking out some new form of accounts. There had been no unusual delay. In previous years they had never received the accounts till four months after the date up to which they had been made. The details were some which the auditor required before passing the accounts.

A SHAREHOLDER said he would like to have their appreciation of Mr. Merrylees' services recorded in the minutes.

The CHAIRMAN then read the following paragraph from the manager's report: "During the past year I have, in the interests of the company, had to make some changes in the personnel, and in the method of conducting the company's business, but I can assure you now with every confidence that there is nothing but harmony among us all, and that the great change I have made in the method of the company's business by removing it to the mine itself, has already been productive of the most beneficial results." One of the changes was the removal of the offices to the mine, whereby they saved \$1000 a month.

The report was carried unanimously.

The CHAIRMAN said the next business was the election of a director. By his own special request his name appeared as the director to retire in pursuance to the Articles of Association. The reason was that so many members of his family were connected with the company that some shareholders might consider it to be "a nice little family concern." He, therefore, desired to give them the opportunity of saying whether they wished him to remain a director.

Mr. JAMES MACREAR thought they would go very far before they would find anyone to fill the Chairman's place in such an efficient manner. He, therefore, begged to propose Mr. William Furber's re-election.

Mr. VANDERBILT seconded the motion, and it was carried unanimously.

Mr. Littlejohn, F.C.A., was re-elected auditor.

The meeting was adjourned *sine die*.

A hearty vote of thanks to the Chairman concluded the proceedings.

THE NEW WELSH SLATE COMPANY LIMITED.

The development of the mines.—Prices fully maintained.

The fifth annual general meeting of the shareholders of the New Welsh Slate Company (Limited) was held on Wednesday, at Winchester House, the chair being occupied by Mr. JOSEPH HOWARD, M.P.

The SECRETARY (Mr. F. L. Clark) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen, Mr. Ashley is unfortunately unable to be with us to-day, and in his absence, which we all very much regret, I have been asked to take the chair at this meeting. In moving the adoption of the report and accounts, I shall only make a few remarks, and afterwards I shall ask our managing director, Mr. Roberts, to give you a statement as to the prospects of the quarry at the present time, from which during the past week he has just returned. We regret that we have not a more favourable balance sheet to place before you. The working account shows a profit of £1350, but after paying the debenture interest—which, I may remark, we have paid up to June 30th last—the profit is turned into a debit balance of £461. There is, however, one remark to be made in connection with this, and it is that we have written off against revenue account this year a larger amount per ton for the maintenance of the quarry than hitherto. That course has been adopted out of greater caution, and if we had kept the figure the same as on previous occasions, we should have shown something like an even account. All I can say is that we, the directors, and all our staff have done our very best during the year to maintain the production of the quarry, and I think we have succeeded in doing this, notwithstanding some difficulties in connection with certain parts of the property, because our output this year has been 6906 tons, against 7330 in the previous one, while we have also done a considerable amount of development which has already begun to produce a quantity of slate, and which will in all probability eventually considerably increase our production. At the same time I must say our Chairman has on many occasions pointed out that there is no chance of this company making a large profit until we can send more money on the quarry, and unless we can get a very much larger number of chambers open. That, of course, means a considerable further outlay, and the finances at the present moment will not admit of our doing this. We have really carried on our development during the year very much out of the pockets of the directors, who have advanced some of money, as you will see by the balance sheet, up to £1700, in order that the works might not be stopped. I am glad to say we have now reduced that loan to about £900, and we have also very much reduced the amount of trade debts which appear on the balance sheet. Our stock is also considerably lower, and I think it is at the lowest point to which we can expect to get it. Of course the directors cannot be expected to go on advancing money. It is neither desirable nor agreeable that they should do so, but before we go to the shareholders or others and ask them to put some money into this concern, we feel we ought to have the co-operation of the debenture holders, and we propose to approach them to see if we cannot get some concessions from them. If we can succeed in doing that I believe you will consider from the report Mr. Roberts will present to you that we have full justification for thinking that the quarry will do in future what we anticipated of it when we started this company. Trade prospects are good, and I think we may fairly anticipate that the good prices we have recently had for slates will continue. I do not know that I have any further observations to make, but after the resolution has been seconded I will ask Mr. Roberts to tell us what he has seen at the quarry.

Mr. R. HUGHES HOBLEY seconded the resolution.

Mr. N. F. ROBERTS said: Mr. Chairman and gentlemen, if I

give you a short account of what has been done at the quarry within recent months you will be in possession of all the information up to date, whereas the report only brings it down to three months since. Last year we pointed out that if we could spend about £3000 on the quarry during the ensuing 12 months we should probably be able to increase our production about 100 tons per month. The present production is almost exactly the same as it was this time last year, but we have not spent so much as £3000. The preference shares to the extent of £4000 which we offered to the shareholders were only partly taken up—to the extent of about £3000—and, as has been pointed out, the directors have had to find money to enable the development to be carried as far as it has been, and the development cost, therefore, has only been about £2600, the greater part of which has been expended in opening the new floor D south, which is only just beginning to produce. I am hopeful that from that floor during the next 12 or 15 months we may get a fair amount of slate. But, at the present time, the expenditure of the past 12 months has not been reproductive. During the year we have improved the quarry in two or three ways. The south incline is now doubled to the bottom of D south, and will be in working order in the course of a few weeks, and this will enable us to work rather more economically on the incline. Then Mr. Owen has been very anxious we should open floor E south, to which you will remember we sunk a shaft last year to see what the slate was like. We are now making that a full-sized shaft, and shall get our first bargain in that floor about next July. We shall then have two new floors being worked in the south vein, which contains our best slate, and if we have sufficient capital to open these floors up properly I think we may then anticipate an increase in output. Then in the north we have been working at the opening up of E north, and I am getting anxious about that floor. In about another 18 months we shall have gone to our eastern boundary, and we ought to have the floor below it working upon its heels. I consider that as soon as we have got the shaft completed in the south we ought to begin opening floor F north. If we do not, in the course of two or three years we shall have largely worked out floor E north, and at the same time shall not be in advance with the floor below, and though we may not feel it for two or three years, yet after that time we shall find our production is falling off in the north vein. Then there was the question about our tipping rubbish into the lake. I hoped that by this time that would have been stopped. Last year I mentioned that we were going to make an incline to lift our rubbish from No. 1 level. That incline has taken longer making than I expected, and the tip will not be sufficiently far advanced until next March or April for us to complete our incline; but by the middle of next year, I can safely promise that nothing more will be tipped into the lake. I want to bring the question of electric power before the shareholders. We are spending hundreds of a year in steam power, and letting our water power run to waste, and until the latter can be used, we shall never work our mine with proper economy. In the course of another year we shall have more slate to work at our lake mill than now, as we are opening this new floor in the south, and a great deal more steam power will be wasted than at the present time. I consider we can save £300 or £400 per annum at least if we use our water power properly. Then with regard to our present development the board have decided not to spend more than is absolutely necessary to maintain the quarry at its present output while the directors are still under advance of loans. I believe we are making sufficient profit month by month to enable us to spend on driving and opening sufficient to keep our production at the present point, but not to exceed it. As to prices, these have been fully maintained this year. Stocks are even less than they were last year, and the stocks of the Continental quarries, I believe, are very much smaller. Shipments, naturally, from North Wales have been larger than last year, and I do not think they can possibly be increased. I do not think anybody will be so foolish as to try to open a new quarry of any importance. If they do, I think I can promise that by the time they have got it open prices will have considerably fallen. For the next year, however, I think prices will be maintained as high as at present. There may even be some small advance, but I do not think the large quarry proprietors will be in favour of advancing prices to any extent, while we, of course, can only move as they do. The future of the company depends entirely upon how fast we can go on opening. At the present moment we are spending more per ton upon management than if our production was greater. With these remarks I think I have put the position of matters in a nutshell.

The motion for the adoption of the report and accounts was then put and carried unanimously.

A motion, submitted from the chair, for the re-election of Mr. S. Z. Lloyd and Mr. J. King was carried unanimously.

The auditors, Messrs. Theodore B. Jones and Co., having been reappointed, the proceedings were adjourned for six weeks in order to enable the debenture-holders to be approached.

WHEAL GRENVILLE MINING COMPANY.

The encroachment litigation.—Satisfactory state of the mine.—Dividend of 2s. 6d.

The quarterly meeting of the Wheal Grenville Mining Company was held at the offices, 7, Union Court, Old Broad Street, on Wednesday last, the chair being occupied by Mr. R. W. GOOLD, Mr. D. JULYAN (secretary) read the notice of meeting.

The CHAIRMAN said: Gentlemen, before I commence to comment upon the figures which are before you, and upon the operations which have taken place during the last quarter, there is one subject I should like to deal with. You are all aware that we have had a great deal of correspondence and difficulty with respect to encroachments made upon the Wheal Grenville Mine by our neighbours. This was brought to our notice nearly two years ago, and I wish to refer to it to-day, not that I am in a position to lay before you the results which have accrued from all the proceedings that have taken place, because really I cannot make them out, and neither can any one else whom I have consulted. We shall have to leave that till next meeting; but there have been statements made with regard to the proceedings of my brother committee-men and myself, which I cannot allow to pass. They have blamed us, and one member of your board, I even rather scurrilous language, in which he was called awkward names—but I am not going to follow that bad precedent, as I only wish to lay before you the exact facts of the case. It has even been said by a newspaper, which ought to have been better informed, that we seem to look rather like persecutors than prosecutors in this case—as much as to say, that we were vindictively pursuing our neighbours for the encroachment made upon us, and were unwilling to listen to anything like terms ourselves. So far from that being the case, there is not a semblance of truth in it. (Hear, hear.) Two years ago this matter was brought to our knowledge for the first time, and we were then not informed in any way whatever, and had no knowledge of the fact, that although our neighbours had encroached very largely upon us, we had been little sinners ourselves, and had encroached upon them. Acting upon the statements made to us by our manager and surveyor, the latter a man of 40 years' experience in mining, and who stands higher as a mining surveyor than any other man in that part of the kingdom, we found that the South Condurrow people had encroached upon us, and taken away tin to the value of £2600, according to our manager's report, and according to our surveyor's plans. That was the first intimation we had of anything of the sort, and, of course, we said this thing must be probed to the bottom. We must have a revelation made independent of the old working plan of the mine; in fact, we must have a new plan, which must show us exactly what this encroachment has been. That was done by Mr. Henderson himself, who re-dug the whole affair in the most careful way, and made out his plan showing us that they had taken

away from us 73 fathoms of very valuable ground, each fathom of which contained from 15 tons to 18 tons of tin, and this ground was only discovered to have been taken away by our working a slope upwards in our own ground, which was exceedingly valuable in itself, so valuable that one man came into the Stannaries Court and declared he had worked immediately underneath where they had come down and encroached upon us, and he and one other man had made £127 in a single month at a tribute of less than 7s. in the £. That shows the value of the ground so far as we were able to prove it. When this came to our knowledge we sent a statement to Mr. Clark, the South Condurrow secretary, asking him if his committee were aware of the fact, and what they were prepared to propose and to do. We had no reply for some time, and then Mr. Lane saw the secretary, and he will bear me out in saying that time after time he approached them and tried to get from them some proposition. At last, finding that no proposition came from them, we made one ourselves, which was that our manager, Captain Bishop, and their manager, Captain Rich, should decide what was proper and fair between them, that they might choose an umpire, and we would agree to be bound by their decision. That was rejected *in toto* without any kind of a counter proposition being made, excepting to cry quits, and the only proposition that was ever made afterwards by South Condurrow was one so ridiculous that I am not surprised our solicitor did not even hand it to us. It was that the whole affair, instead of being left to the Warden in the Stannaries Court, should be referred to the Judge of a County Court for him to deal with, and appoint a referee if he so pleased. Our solicitor declined this, and I think he was right, and had it been submitted to me I should have done the same, for why should we go from a superior to an inferior Judge to settle a matter of £2000, and go into a County Court, which formerly was restricted to the sum of £50? From first to last we endeavoured to bring about a compromise, and failed entirely owing to the persistent refusal of South Condurrow to meet us in any way. On the third or fourth morning of the trial the Vice-Warden appeared in terms to me and Mr. Marshall to meet and see if before we came into Court next morning we could not find a basis for compromise. I immediately appealed to the solicitor, and said, "Now, Mr. Thomas, you have heard what the Warden has said; I think we ought to follow his advice. If you think so, will you arrange to meet at nine o'clock to-morrow morning before the Court opens at 10, and, perhaps, we may be able to find some basis upon which we can stay proceedings." At that time a great portion of the expense had been incurred, and, therefore, if I had said "No," I do not think I should have been far wrong, but I thought it wiser to meet them with an inclination to compromise. When nine o'clock came on the following morning the Chairman did not make his appearance, and, therefore, I was bound to put the question to Mr. Thomas—"Are we meeting on equal terms? Are you in the same position that I am in? I am left by my brother committee men with full authority to deal with this question, and, therefore, I tell you I am in a position to compromise to-day. Are you in the same position?" He said, "No; I am not. My instructions are absolute and positive. I cannot depart from them, not to compromise in any way that shall cost South Condurrow one penny piece." Of course, there was an end of compromise. (Hear, hear.) The matter went into Court, and occupied 13 days. Why, I was never able to see. In a London Court it would have been settled in three, but greater latitude, I suppose, is allowed to the Stannaries Court. The judgment of the Warden has been delivered; but, as I said, I am utterly unable to tell you what it is, and our solicitor is just as much in the dark as I am. It is the most peculiar judgment that ever I read in my life, although it took two and a half hours to deliver. After days of consideration I am quite unable to tell you what we shall have to pay or what they will have to pay. All he says in figures is that he gives us judgment for £318 18s. 6d., and £67, the cost of removing a quantity of slate which they had thrown into our mine, and which we thought they had put there for the purpose of concealment. That was giving us a verdict upon our claim for that amount, and then he gave a verdict on their counter claim of £142 4s. 7d., so that there was, according to my notion, a verdict in our favour of £243 13s. 10d. Notwithstanding that he gives the award that we are to pay a certain proportion of their costs as well as our own. These are matters that can only be settled by a reference to Chambers, and it will be carried before somebody in Chambers to say what is the actual meaning of the delivered judgment—I cannot tell. I was only anxious to remove the impression from your minds, and through the Press, from the minds of the shareholders in Cornwall who are not able to attend, that it is an absolute untruth to say we forced this matter into Court, or persecuted them in any way whatever. It is an absolute untruth to say we made no effort to compromise it. We made every effort in our power in that direction. We will now pass to the mine, which is a far more pleasant subject. This case occupied me in Cornwall a great deal, and I was frequently on the mine. Now, I will say this once more, that I never came from the mine better pleased with it as a property than I did upon this occasion. Everything, with one solitary exception, is in the most perfect order. Everything has been done, substantially, solidly, and economically in its way, and everything is in perfect working order for years to come, with one exception—namely, that the engine at Goold's shaft has been working for about 20 years. It was a magnificent engine. It has cost a mere nothing for repairs, and even now it will only be necessary, when we conveniently can, to stop it for five months to give it a thorough overhauling. I am hoping that we are not very far distant from being able to do that. We sank Fortescue's shaft upon the mine to develop the Eastern section, and we put up at that shaft one of the most powerful engines that had ever been erected in Cornwall. That has been at work three years, and is in perfect order. It has carried us down 246 fathoms, which is about the depth of Goold's shaft at the present moment. For two reasons I hope that during the next few months we shall be able to put Fortescue's shaft down 5 or 6 fathoms deeper than it is now, and then the 232 fathom level at Goold's will be driven east towards Fortescue's, and Fortescue's at the same time, will be driven back from the 245 or 246 to meet the 232 at Goold's, and we shall have a gradient which will bring back all the water from Goold's shaft to Fortescue's, and we have abundance of power in the latter engine to deal with it all. There will be a double advantage in that, because our merchants' bills may be considered to be very heavy. In one view of the case they are very heavy, but the preponderating item is the cost of coal. We are burning at the present moment coals to the extent of £600 a month, out of a total cost of £900 or £1000. If we can get this shaft down in the course of a few months to unwater the other part of the mine we shall be able to stop Goold's engine altogether for five or six months (not in the winter but in the summer), and Fortescue's engine will pump all the water we have to deal with. In that case we shall be saving £200 a month in coal. Six months ago I told you that there were two points of very great importance in the mine which have just come on the carpet. One was in the 225 fathom level going east from Goold's, where a rise had been put up and a large piece of ground had been discovered worth over £40 per fathom. That rise has been communicated to the level above, and the lode has continued ever since of equal value. There is a large piece of valuable ground all but untouched, to which we have to look in the future. I told you also on that occasion that there were indications that our lode in Fortescue's shaft was getting richer the deeper we went. Since then six months have elapsed, and we have had far more experience of it. That has been so fully confirmed that there can be no controversy about it. When we got down below the 205 fathom level the lode began to improve, and continued doing so from £15 to £20 until it got worth (just below the 295) £50 a fathom, and only 6 or 7 feet of the lode was then carried in the shaft. Immediately after that, when we had got down a fathom or two more, the shaft became filled with the lode—that is to say, the lode backed into the shaft, and it then became worth £100 per fathom, and continued so, more or less until the shaft, which we are compelled to carry down in a perfect line, and the lode varying a little—the lode came partially away from it, or rather there was left only a portion of it in the shaft,

That has become worth £50, and the other day it seemed to be going back into the shaft, and is worth more than that now. There we have had 20 fathoms of lode in the shaft in the richest part of our mine, and have touched none of it except what came out of the shaft. Below the 225 we brought away about 200 tons of ore. The average of our stuff in the upper levels has been 12 to 22 per cent., but now these 200 tons have averaged between 5 and 6 per cent., and one or two assays made of some particularly rich stuff averaged 9½ per cent. 5 per cent. means more than 1 cwt. to the ton, and 9½ per cent. nearly 2 cwt. At the 225 we have driven a level east and west. We have driven a good many fathoms westward and eastward, and the lode continues valuable the whole way. My impression is that from its being so valuable in the shaft, when we get below we shall find it as valuable on either side of it as it is in the shaft. I may say in a few words that I do not believe the mine ever looked so well as it does at the present moment. (Cheers.) It was never so prosperous; it never returned the same amount of tin, nor the same quality as it is doing now. (Renewed cheers.) There is however, a dark spot on our otherwise bright horizon, and that is the price of tin. It is lamentable to raise 300 tons of tin during the past quarter, and get but £42 a ton for it. Exactly 18 months ago tin was selling at £95 a ton. The highest price touched in the first quarter of last year was £94 5s., and we received for our black tin £56 15s. with 5s. carriage, making £57 a ton. In the first quarter of 1893, and also the second, the price dropped from £94 to £84. In the third quarter, from June to September, it dropped from £84 to £79. In the first quarter of 1894 it dropped from £79 to £75, and in the next quarter, from March to June, there was little or no change. In the third quarter of 1894 there was another drop from £75 to £69, making a total drop during that 12 or 15 months of no less than £27 a ton. That means that we did not get as much for our tin last quarter by about £17 15s. 6d. as we did then, and if we had been getting the price of only 18 months ago I do not think we should have much cause for talking about any cloud whatever during the past quarter. We returned during the last quarter 311 tons of tin, and the drop in price was equal to very nearly £17. Take it at £16, and 311 tons at £16 means £4976 that we received less than we should have done if the price had been sustained. Add this to what we sold for £13,105, and we should have had £18,082 for the quarter. Our total expenses were £12,734, and if you deduct the expenses you would have had a profit of £5348, and in the costs I include £200, the extra dues which we should have had to pay to the landlord. Taking everything into account, our profits on the quarter would have been equal to nearly £1 per share. What are we getting? We sold 311 tons of tin, and got for it £42 1s. 6d. a ton, making £13,106 3s. 3d. Our costs are £12,534 9s. 10d. Those for labour were £6641 1s. 7d., being equal to £24 17s. a ton; £3793 for merchants' bills, or £12 3s. 6½d. per ton; lord's dues were £528 8s. 1d., or £1 13s. 8½d.; local charges £209 8s. 8d., equal to 13s. 5½d.; and all other charges, £254 17s. 7d., equal to 16s. 4½d. per ton, so that it cost us to raise our tin during that quarter £40 4s. 9d., and for every ton we have to take £42 1s. 6d. That is lamentable; but we may see better things before long. Our total sales were £13,106 3s. 3d., less cost £12,534, leaving us £571 13s. 5d. as the net working profit of the quarter. Then we reserved on profit and loss account from the previous quarter £608 15s. Add that to the other amount and it will give £1180 8s. 6d. of available profit to-day. We shall have some expenses to look forward to in connection with this encroachment case, though we have already paid something on account, and perhaps some of us might think, looking to that fact, that we ought to be cautious in what we do to-day as regards dividends, but I am not fearful of the future, and I say, with all the disadvantages we have to contend against, we have been able to make a decent profit during the quarter, and I think we were fully entitled to show that our shareholders, who for so long have been deprived of dividends, to any extent, at all events, ought not to be mulcted this quarter, and although I should like very much to see the dividend we paid on the last occasion maintained, yet we must not go quite so far as 5s. I think if we divide 2s. 6d. we shall be able to do that very well, and certainly safely. To pay 2s. 6d. out of £1180 will absorb £750, which will leave us with £430 8s. 5d. balance to profit and loss account. But we have another account which was set by for exactly such a contingency (or one of them) as has occurred—a sum of £334 2s. 11d., and the two added make £764 11s. 4d. We can divide to-day a 2s. 6d. dividend, and keep in hand £764 for whatever may happen to us in future. I beg now to propose "That the statement of accounts, together with the agent's report, be received, approved, and adopted." (Cheers.)

Mr. WILLIAM BELLINGHAM seconded the motion, saying that the whole financial position had been very thoroughly considered by the committee, who felt that what the Chairman had proposed was the right thing to do. (Hear, hear.)

The motion was then put and carried unanimously. The CHAIRMAN proposed "That a dividend of 2s. 6d. per share be and is hereby declared, payable forthwith to the shareholders whose names stand on the register of members this day." He was sorry the dividend was so small, but it should not be forgotten that they were in a splendid position to return a larger quantity of tin, but at the present price he thought it would be foolish. Their plan was to satisfy themselves with a moderate dividend at present, and make a reserve fund underground as well as above ground. (Hear, hear.)

Mr. FRANCIS G. LANE (one of the committee) said: Although the price of tin is so low, I think your Chairman has made clear to you the great improvement that has taken place in the mine, and particularly how that improvement has occurred in depth. There is, therefore, a guarantee that we shall be able to make some profit even with the present price of tin, though not so much as we ought to. All the mines of Cornwall are suffering from the low price of tin, and there is very little doubt that should it continue the state of affairs in the county will be very bad indeed. As long as Grenville can go on improving in depth it can also lay by a nest egg for future profit. Though the present dividend is a small one, it is quite as much as we feel justified in recommending. (Hear, hear.)

Mr. STRAUSS asked whether more tin could have been produced had the committee chosen to do so.

The CHAIRMAN: In the bottom of Fortescue's shaft the condition of the lode is such that the moment we get another stope or two we can produce a much larger quantity than now; and if tin were a little higher there are a dozen places from which we could bring it away at a profit that we are leaving at present. Our object is, when we have a good price, to work the lowest quality, and then your reserves are of the better class when prices become low. Do not think for a moment the mine is worked unfairly. Captain Bishop would not work it so even if I asked him, which I should never dream of doing.

Mr. STRAUSS asked whether any special instructions had been given to the manager to decrease the output.

The CHAIRMAN: Our instructions are that we simply want to meet our expenses and pay a small dividend in the meantime, and I may say we have stocked tin again this quarter. In the past two quarters we made a considerable sum by selling out at the highest point, though we may not be lucky enough to do that again.

The motion was carried unanimously.

The CHAIRMAN proposed a hearty vote of thanks to the manager, the agents, the purser, and the staff generally, for their continued interest in the company and their perseverance in developing the mine. He was thankful to have been able to have watched the mine as he had done, for it had brought him more into contact with men whom he esteemed and valued. No mine in the county was better served by its staff than Wheal Grenville.

Mr. HOLMAN (of the firm of Holman Brothers, of Camborne) seconded the motion, and in referring to a remark by Mr. Lane, assured the shareholders that they were doing their best with the underground contract, and the company was saving in the matter of time over hand labour. He considered the mine to be in a very satisfactory position, and it could not be maintained there unless every economy were used. This caution and this energy they certainly had in Captain Bishop and the staff. They ought by this resolution to show they thoroughly appreciated their efforts.

The motion was then put and carried unanimously.

Mr. STRAUSS proposed a cordial vote of thanks to Mr. Gould, which was seconded by Mr. S. O. GRAY, and carried unanimously.

The CHAIRMAN acknowledged the compliment in these terms: It has been a great pleasure to me to work in Wheal Grenville, and the statement of Mr. Strauss has given me peculiar pleasure. It is true that on several occasions I have been tempted into the realms of prophecy after consultation with my colleagues, and I am proud to hear him say, although I knew it before, that on some occasions I have been right in my prognostications of what was going to happen. (Cheers and laughter.)

The proceedings then terminated.

KILLIFRETH.

Dividend of 1s. 6d. per share.

A 16 weeks' meeting was held on the mine, on Tuesday, Mr. T. F. TROUSON (purser) presiding.

The accounts showed: Labour costs, £3223; merchants' bills, £1441; dues, £113; and other expenses making the total costs £4773. On the other side, 121 tons 11 cwt. 0 qr. 21 lbs. of black tin (at an average of £40 0s. 2d.) had realised £4875 6s. 1d.; arsenic, £208; halvans, £98; extra carriage of tin, £13; discounts, £32; making the receipts £5231, leaving a profit of £458 on the quarter, making the balance in favour of the mine £485.

The report of the agents, Captain R. A. James, Oliver Northey, Philip McNeill, and J. W. Bryant, was as follows:—

His lord's engine shaft sinking below the 70 by 18 men is down 10 fathoms. This shaft will be sunk 10 fathoms deeper before crosscutting south to the middle lode. In 70 west of the elvan we have driven altogether 23 fathoms in lode worth for the whole distance £15 per fathom. The lode in the present and is large and worth for tin and arsenic £20 per fathom. There is also a piece of tin ground for 12 fathoms long in the bottom of this level (east of the elvan) worth £25 per fathom. The rise in the back of this level is up 15 fathoms. The rise for the first 10 fathoms was worth £12 per fathom. Since then the lode has been disturbed by a crossing and the elvan. When this rise is holed to the Skip shaft it will give good ventilation, and enable us to stop at the back of the 70 to much better advantage. The rise in the 50 west has very recently been communicated to the 40, and two large stopes in the bottom of this level, which were idle during the greater part of the past four months, are now working, and from the appearance of these stopes the 50 and west, which is now being driven through the crossing, should soon come into a good lode. We have again found it necessary to drive the 50 and east for the better working of a large piece of stoping ground immediately above and beyond this end. There is a winze sinking in the bottom of the 33 west worth £3 per fathom. Also a winze sinking in this level, east of Skip shaft, in entirely whole ground, worth £10 per fathom. In the 20, driving west, the lode is worth £10 per fathom. There is an end driving on the north part of the lode, at the adit level, worth £8 per fathom. In reading this report of the Middle lode, and referring to the section of the same, one will readily see that there are ends and stopes being worked from the back of the adit, or upper level, to the back of the 70, or lower level, and for considerably over 120 fathoms in length; needless to say, a large proportion of this ground has been taken away, and the tin sent to the market; but there is still a large quantity of productive ground left, particularly in the back of the 50 and 70 fathom levels. Unfortunately, the long piece of tin ground in the bottom of the 70, east and west of the elvan, cannot be stoped until Richard's shaft is sunk to the 90, and crosscut driven under it, and to do this important piece of work faster than is possible with hand labour, we are erecting a compressor, equal to driving three rock drills and shall soon have it working.

The CHAIRMAN thought that, in spite of the low price of tin, they might claim to have done as well as anybody else, and a little better than most people. (Applause.) During the past quarter, owing to further drops in tin, the tin sold had realised £1 per ton less than in the previous 16 weeks. That made a considerable difference on the 120 tons sold. They had crushed rather less stuff than last time—in fact, it was 384 tons less; but their average produce showed an improvement, it being rather over 38 lbs. to the ton, instead of 36 lbs., as in the previous quarter. On the whole, he thought the position rather satisfactory. (Applause.)

Mr. N. B. BULLEN asked how much they had sunk below the 70 since the last meeting.

Captain JAMES (the manager) said they commenced to sink at the beginning of the quarter, and had sunk 10 fathoms, or probably 11 fathoms.

Mr. N. B. BULLEN: What did that cost?

Captain JAMES thought that last month they paid £70 for the labour, but that in the previous month it was not so much.

Mr. SIMS enquired how fast they were driving the 70 west by hand labour.

Captain JAMES stated the men were doing their best, but could not drive more than about 3 fathoms per month. He should like to see it opened up faster, as they had an important piece of ground there, and he thought it was intended to do so. If they had a rock drill in that end they would be opening up more ground than they were taking away now.

The CHAIRMAN said he should like it to be known they were now paying 1-40th dues. At the last meeting it was said they were paying 1-25th, and that was what the lease made them liable for. But shortly after the last meeting the committee thought, considering the low price of tin, it would be well to appeal to Lord Falmouth, and he was pleased to say his lordship had granted a remission to 1-40th for six months, from June 24 last. It was gratifying to state that all applications of a reasonable character made to Lord Falmouth had been granted, and he must also remark that the applications had always been well received by his lordship's agents. (Applause.)

Mr. J. WICKETT thought they should approach Lord Falmouth with the request that the dues should remain at 1-40th while tin was so low. When tin was making a good price there was nothing amiss in paying 1-25th in that shallow mine.

It was decided to consider the point at a future date.

Mr. LEE (Liskeard), in moving the adoption of the accounts, said that during the past quarter they had sold more tin than in any previous quarter in the history of the mine. (Applause.)

Mr. NETTLE seconded, and the motion was adopted.

Mr. COLEMAN (Liskeard) thought that they could with propriety declare a dividend of 1s. 6d. per share, leaving £35 or £36 to carry forward, especially as their merchants' bills and labour costs were charged up so close. (Hear, hear.)

Captain BRAY seconded, and the motion was adopted unanimously.

Mr. N. B. BULLEN moved, and Mr. C. E. PARKYN seconded, a vote of thanks to Lord Falmouth for his kindness in reducing the dues, and this was carried.

Mr. STEVENSON proposed that the manager's salary be increased to 12 guineas per month. Captain James was not only manager, but engineer, surveyor, and dialler, and he (the speaker) thought they had treated him very badly in giving such a small salary. (Hear, hear.)

Mr. J. THOMAS seconded, and Mr. RICH supported.

Mr. WICKETT thought the committee should be asked whether they had looked into the matter.

Mr. NETTLE (one of the committee) stated that the committee preferred leaving the matter in the hands of the shareholders.

Captain JAMES explained that more than six months ago the committee were prepared, on their own responsibility, to increase his salary, but that he expressed a wish to have the matter dealt with by the shareholders, as he considered it would be somewhat better if an increase came from a meeting of shareholders. (Hear, hear.)

The motion was carried unanimously.

Captain JAMES, in acknowledging, thanked the shareholders for the confidence they had shown in him as manager of the mine. He, and those on the mine, saw the necessity of developing the property more rapidly, and should probably sink the shaft more rapidly. They intended crosscutting north and south to that and the old lode. When they had crosscut to the old lode they proposed to get to the 120, so as to have 30 fathoms there high and dry; and it was his strong opinion that they would find good ground there just as had been worked above. If they got an air compressor and a couple of drills, they would get down in this generation and not in the next. (Laughter.) With hand labour it took a long time to do a little. Their wish was to keep pace with the output, and they were prepared to open up the tin at the present time. They had a long

piece of ground in the bottom of the 70, but it was impossible to stop it until they got the shaft down. He thanked them cordially for the expression of confidence they had shown. (Applause.)

Mr. COLMER asked what was the average wages of the men and boys underground.

Captain JAMES said the average earnings of the miners in Killifreth was £3 5s. to £3 10s. per month, and the average of the boys' earnings 35s. to 40s. per month.

On the motion of Mr. N. B. BULLEN, seconded by Mr. SIMS, votes of thanks to the Chairman and agents were passed, and the meeting concluded.

THE AUSTRALASIAN MINING COMPANY, LIMITED.

Prolonged negotiations for a new property—The directors' proposal adopted.

The ordinary general meeting of the shareholders in the Australasian Mining Company (Limited) was held on Thursday, at the Cannon-street Hotel; the chair being occupied by Mr. HENRY WELD BLUNDELL.

The SECRETARY (Mr. John Garland) read the notice convening the meeting.

The CHAIRMAN, in moving the adoption of the report and accounts, regretted at the outset that the meeting had been inadvertently fixed to take place on a Stock Exchange holiday. Had the fact become known at an earlier date to the board, steps might have been taken to prevent it. At the last annual meeting it had devolved upon him to inform the shareholders that, so far as they were able to ascertain, the two principal reefs which had been the support of the company since its formation were pretty well worked through, and that there seemed but little prospect of their being able to find any more payable ground within the limits of the five or six acres owned by them. It was the wish of a large number—probably of all the shareholders—that no effort should be spared and no time lost in the endeavour to secure an additional property that would hold out a reasonable expectation of yielding good profits. For a long time previously many offers had been received from property owners in Australia and elsewhere, some of which were distinctly of a favourable character, but in most cases the prices asked were a good deal in excess of the capabilities of the company and beyond the limits of their purse. They were, moreover, for the most part far too speculative in character to justify the board in doing anything, but let them severally alone. Among those of a nature to command the close consideration of the board were some very rich properties in the Coolgardie gold field of Western Australia. For himself he was very favourably disposed towards this colony, having resided there for four years, and having travelled over some 4000 miles of the country on horseback. Accordingly he communicated with some of his many friends there in the hope that they would be able to introduce to them some promising property on favourable terms. All the answers were to the same effect—that the excitement occasioned in the mining market by the West Australian boom rendered it of the first necessity that in undertaking the purchase of a property the board should be represented in the colony by an experienced man to inspect the proposed mines and conduct the negotiations. The discovery of many rich mines in West Australia had made the industry there of so favourable a character that the directors thought they were hardly justified in neglecting the opportunity. In the choice of an engineer they were largely guided by the belief that one starting from England would be less likely to be affected by the feeling of excitement prevailing in the country. By the advice of their managers, Messrs. John Taylor and Sons, they decided to send out Mr. Samuel Gifford, a gentleman well known in the mining world as a man of wide experience, and of considerable knowledge upon matters quite apart from mining, and who had reported on several important mines. The class of property within the means of the company to purchase was definitely explained to him, and a wide latitude given to him, which carried with it, however, the responsibility of acquiring a good property, and accompanying it with a personal recommendation of his own. Letters of introduction to several of the Chairman's personal friends in the colony were given to him, including some to the Premier, the Colonial Secretary, and to the Surveyor-General. Mr. Gifford, therefore, was aided in his mission by the best services these gentlemen could render to him, and spent three months upon the Coolgardie gold fields. Perhaps the clearest notion of how matters had progressed would be conveyed by his reading the cablegrams since received from Mr. Gifford. The first—after he had examined the Southern Cross gold field—was to the following effect:—"April 10, 1894.—Have examined the greater part Coolgardie centre. Have found none of the statements made satisfactory. All explorations, so far, show that the veins are irregular. There are not sufficient developments to justify the best offer. Nothing presents itself at this moment. I am going to visit outlying points." About a month afterwards the following cablegram came to hand:—"May 3, 1894: Have visited now every centre. Returned here to cable. The main geological features, volcanic rocks, much associated with schist, no regular reef, numerous veins of quartz, erratic, broken throughout; there are plenty of indications of the existence of gold, with rich ore occasionally in pockets. From present developments done seems as if ore diminishes in value with depth. The gold is associated with ironstone. Alluvial gold, very much scattered, was caused by disintegration country rock. Great want of water; this will be a great drawback. Conditions opposed to economic mining. Cutting into rich shoot of ore very possible. I am offered for a few days mining claim, 12 acres, for the lump sum of £2000. The property is situated 3 miles from Coolgardie. The estimated length is 1200 feet; has been developed to a depth of 40 feet by a shaft sunk on the vein. The average width of the vein is 2 feet 6 inches, and at the bottom of the shaft constantly varies in width. Samples can be found showing free gold, but the average is low, judging from appearances only. Believe I can obtain adjacent claim the same in every respect on the same terms as before; also 48 acres, located on White Feather centre, for £5000; appearances, developments, practically the same as the previous. The property is well worthy of further investigation. Though the value of the property is entirely prospective, it is decidedly the best that can be done. Could be thoroughly tested at a cost of £3000, if any discovery made. Expenditure on plant will amount to £10,000. First proposal the best. Advise me as to course to be pursued. Speedy action required. Any delay would be most injurious." This communication came rather as a disappointment to the board, who came to the conclusion that the two properties submitted were the best Mr. Gifford could find, and that he proposed to leave it to the directors to do what they thought right. They regretted the absence of any definite expression of opinion upon his own part, and as Mr. Gifford's mission was completed, the only course open to the board was to recall him. In the meantime they had received many offers of properties from other sources, including a tempting, but rather big property in New Zealand. Other Queensland mines were offered, and a silver property in New South Wales; but their opinions formed were that these were of such a kind that no prudent man after

examination would have felt justified either in recommending the shareholders to put their money into it, or doing so themselves. Their attention was, however, soon directed elsewhere. The local board of directors had been written to more than once, asking that they should carefully keep their eyes open in case anything suitable should turn up. Towards September a communication was received from the local directors, couched in the following terms:—"We strongly recommend the purchase of Two North Smithfield, on Smithfield line, east of Four Phoenix, immediately north of Smithfield and Golden Pile. Price £6000. James approve. Offer subject to immediate reply." To this the board replied:—"Report by telegraph the extent and depth of the workings of the claim. What will be the cost of development. What do you propose doing with regard to crushing. Ascertain from the vendors if the vendors will accept small deposit pending the result of general meeting of shareholders." The directors were, of course, desirous of getting the option for a sufficiently long period to enable full reports of the property to be received. Shortly afterwards the following additional cable came to hand:—"The property comprises 25 acres. The shaft has been sunk 100 feet. Surveyors report the reefs on the property amount in number to two. Smithfield for a length of 600 feet, Columbia 1000 feet on the line; first slate formation 600, second 900 feet. We estimate the cost of sinking at £5 foot. We can crush on satisfactory terms. Offers will be kept open for one month. £150 to be deposited immediately. Telegraph us instructions." The directors upon the spot were best able to form an opinion as to the property, but the board here were certainly of opinion that it was the best which had been offered to them from the commencement. The recommendation of the local board was, of course, a weighty one. The members composing it were gentlemen of known integrity and honour, and of considerable business experience besides. The approval of Captain James was a strong point in favour of the property. He had been connected with the company since its inception, and had shown himself to be a sober-minded, experienced man—not at all liable to be carried away by enthusiasm. With these considerations before them, the board telegraphed out:—"Pay deposit. Keep the offer open until 20th of December if possible, allowing time for written report general meeting of shareholders. Telegraph what you have done." The reply came back:—"Deposit has been paid. Have seen the vendors. Cannot keep offer open any longer than 3rd of November." A further request was sent:—"Further information required. Send sufficient details to enable us here to form an intelligent opinion about the matter. What is the result of adjacent properties. What is the distance nearest profitable mine. Please telegraph us at once." Their reply was:—"Nearest payable mine, One North Smithfield, is about 1000 feet. South Columbia Reef averages about 3 ounces 10 dwts. per ton. Smithfield Reef is one of the best veins in the district. In the North Smithfield Golden Pile Phoenix have paid £215,000 during the last three years. If you have plan, Gypie gold field easy to locate the claim; the property is worth £4000 at the present quotation. Market advancing." There was, indeed, a map of the locality in the possession of the London board, but it was hardly of sufficient accuracy to enable them to form a clear opinion as to the value of the property. There were, however, undoubtedly three or four excellent reefs running through the gold field—reefs which when worked almost invariably afforded payable gold. So far as they had been able to ascertain, these reefs were immediately around the property it was proposed to purchase. Since the telegrams already mentioned, two others had been received:—"October 24, 1894.—Four Phoenix have cut the reef in the eastern crosscut, but have not seen any gold in it on the 580 feet level. The vein runs north and south. Two North Smithfield will probably be about 800 feet on the same level. If the purchase completed, have the money here within the specified time." And "October 26, 1894.—Since we telegraphed Four Phoenix, the reefs show visible gold slate formation underfoot." This seemed to them to be highly satisfactory, and accordingly they had resolved to submit the proposed property to the judgment of the shareholders, deeming it probable that in securing it they would have acquired a property capable probably of yielding handsome profits, and of putting them once again upon a sound and successful basis. A few words might be added as to the accounts. Operations at the mine had during the past 12 months been small, and the balance against them upon the year amounted only to the insignificant sum of £73s. 5d., while at the present moment they had assets amounting to £22,599—a very fair sum to start operations. In conclusion, the Chairman confidently submitted the proposal to the acceptance of the meeting, and moved the adoption of the report and accounts.

Mr. ALFRED ROMILEY seconded the motion.
A SHAREHOLDER enquired whether any of the machinery of the present mine would be available for the new property.
The CHAIRMAN replied in the negative.
The motion was then put and carried unanimously.
Further resolutions were unanimously carried re-electing the directors *en bloc* and re-appointing the auditors.
A hearty resolution of thanks to the directors, carried by acclamation, terminated the proceedings.

FORTHCOMING MEETINGS.

We shall be obliged if Secretaries or other Officials of Mining, Railway and other Companies will be good enough to advise us as early as possible of the date, time and place of their forthcoming meetings—whether statutory, semi-annual, annual, general or extraordinary, confirmatory or adjourned—in order that particulars may be announced for the benefit of our subscribers and more particularly our country readers. Balance sheets, reports and other matter to be submitted at such meetings should, where possible, accompany the intimations of the meetings sent.

Name of Company.	Place.	Nature of Meeting.	Date.	Time.
Darien Gold	Manchester.	General	Nov. 5	
London and W. A. Expirn.	Winchester Ho.	General	Nov. 5	12 noon
South African Gold Trust	Cannon Street	General	Nov. 5	2.30 p.m.
Balkis Land	Winchester Ho.	General	Nov. 6	11 a.m.
San Pablo Nitrate	Winchester Ho.	General	Nov. 6	2 p.m.
Kofffontein Mines	Winchester Ho.	General	Nov. 6	3 p.m.
Atlas Co.	Cambridge.	General	Nov. 7	3 p.m.
New Louis d'Or Main Reef	Winchester Ho.	General	Nov. 8	2.30 p.m.

THE LONDON DERRY AND WEALTH OF NATIONS MINER.—Conflicting reports have been current respecting the acquisition of the right to purchase the Londonderry and Wealth of Nations Mines. Colonel North and Lord Fingall have jointly acquired the interest. The specimens from the Londonderry, weighing more than half a ton, and of extraordinary richness (including the monster nugget, "Big Ben"), are now in London, and arrangements are in progress for their immediate exhibition in a prominent position in the City. Specimens from the Wealth of Nations, of equal value, are now on their way to this country, in charge of a trustworthy agent of Colonel North.

NEW MINERS MINING COMPANY (LIMITED).—The seventh ordinary general meeting of this company was held on Thursday, at the offices, 6, Queen-street-place. Mr. E. A. Pontifex presided. On the motion of the Chairman, seconded by Captain F. Retailack, the report and accounts were adopted.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c. of Mining and other Companies.

Darien Gold Mining Company.

The directors' report states that considerable progress had been made towards developing the south mine, which they have every reason to believe is the famous Espiritu Santo mine, so successfully worked by the Spaniards in the 16th and 17th centuries. They cannot at present state either the width or length of the lode recently discovered, for the reason that the hanging wall has not been reached, neither has its boundaries on the east and west side been determined. The manager thinks it an enormous lode capable of almost anything, containing pay ore in such quantities as to guarantee the running of the stamps for many years to come. In calculating the revenue likely to be received with the present crushing capacity (1500 tons per month), Mr. Woakes has not reckoned the possibility of finding in the lower levels a continuation of the rich pockets such as the Spaniards only worked for in the levels already exposed. At the last annual meeting it was mentioned that the estimated cost of running the tunnel and improving the mine to a depth of 90 feet would be between £7000 and £8000. The directors have now much pleasure in stating that this estimate has not been exceeded. On the contrary, the mine has been proved at two-thirds of the amount, leaving a substantial balance out of the original subscribed "C" capital towards the purchase of new machinery. In order to buy this plant and provide sufficient working capital, the directors have allotted 8122 "B" shares, making a total of 30,000 "B" shares issued up to the present time. This, together with the uncalled amount on 10,000 "C" shares subscribed, will leave £13,000 cash to meet the current expenses until crushing commences early next year. They have entered into an agreement with Mr. Woakes by which he will continue as their manager on terms varying with the profits of the mine. He is at present in England looking after the special pumping plant to enable them to sink at least 400 feet without any additional machinery, and will return to Canada in December, so as to be on the spot at the beginning of the dry season.

Golden Feather Channel.

The following is from a circular issued to the shareholders. The directors have carefully considered the cables received from the company's manager and their colleague, Mr. Borwick, and can only come to the conclusion that the decision arrived at—though very disappointing—is under the circumstances the wisest course to adopt. When work was suspended last year the completion of the new foot dam and the removal of the elevator were in progress, and these works it was confidently believed would be completed early in the present season in time to allow several months of uninterrupted mining. Very great difficulties were, however, encountered in sinking to bedrock, in order to place the elevator in its new position. It seems now too late in the commencing mining for returns this season, thereby incurring the risk of having the works suddenly wrecked by winter storms. Obviously, then, the safest and best plan to adopt is to utilise the remainder of the season by putting the whole of the works in a shape of absolute preparation for the coming winter. With the main elevator in its new position ready to set to work, mining for returns can be commenced directly the river is turned in 1895. This is a condition never before attained in the history of the mine, and will ensure the working of the river bed for several months in the coming year. They will defer the actual reconstruction until Mr. Borwick's return, in order that the shareholders may have the opportunity of hearing his report; but the plan they propose, is reconstruction with a share capital on the present basis—180,000 ordinary shares of 20s. each, credited with 18s. 6d. paid, and 11,979 fully-paid priority shares as at present existing. One shilling per share, which is all they now propose to call up, will more than provide for the payment of existing liabilities, and for carrying the work to the turning of the river in 1895. With the assurances of support already received from many of the largest shareholders, the directors entertain no doubt whatever but that the reconstruction can be successfully carried through.

The New Miners Mining Company (Limited).

The revenue account shows a loss of £888 19s. 9d. on the year's work, accounted for by the low prices realised for the blende and lead ore, and by the falling off in the quality of mineral produced by the mine, the total quantities being 939 tons of blende and 250 tons of lead ore for the year ended June 30 last, as compared with 1393 tons of blende and 745 tons of lead ore in the previous 12 months. The actual difference in the values realised for the two years was as follows:—To June 30, 1893, £13,201 4s. 2d.; to June 30, 1894, £6341 6s. 8d.; decrease in 1894, £6859 17s. 6d. The profit and loss account shows that £734 6s. 11d. has been written off for depreciation of machinery and plant, and £32 11s. 9d. has been paid for income tax. These sums, together with the debit balance brought from the revenue account, make a total of £1655 18s. 5d., leaving a balance of £1317 18s. 10d. standing to debit of profit and loss account.

We are informed that, in accordance with the suggestion of the Board of Trade, Mr. W. W. Baker has now forwarded a requisition for a special meeting of the SUNBURST GOLD MINING COMPANY, signed by holders of 14,800 shares, out of 73,264 shares issued.

The report of the directors of the AURORA GOLD MINING COMPANY for the half-year to August 31 shows a loss of £450, the mill being at work for only 26 days during that period. The available reefs above the third level have been worked out, and before work can be resumed on a remunerative basis a large amount of money will have to be found for heavier stamps, rock-drilling plant, air-compressors, suitable sorting floors, cyanide plant, &c. The directors hope to be able to put an acceptable scheme before the shareholders shortly.

The directors of BAYLEY'S WEST and BAYLEY'S WEST EXTENDED have appointed Mr. W. T. Begelhole, late sub-manager of the Bayley's Reward Gold Mining Company (Limited), general manager of the above two companies.

CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA.—The Deutsche Treuhand-Gesellschaft, of 9, Behrenstrasse, Berlin, W., have been appointed the representatives of this company in Berlin.

THE MYSONE GOLD MINING COMPANY (LIMITED) has declared an interim dividend of 1s. per share, tax free, payable on November 17.

THE HARQUAHALA GOLD MINING COMPANY (LIMITED) announces that dividend warrants for the fourth dividend of 6d. per share (free of income tax) have been posted to all shareholders registered on the company's books on September 29 last.

A dividend of 25 per cent. (being at the rate of 50 per cent. per annum) has been declared by the board of the CROWN REEF GOLD MINING COMPANY (LIMITED) for the half year end-

ing September 30, 1894, payable to shareholders registered in the books of the company at the close of business at 4 p.m. on Tuesday, November 13, 1894. The dividend will be payable from the company's head office, Johannesburg, on December 24. The transfer registers will be closed from November 14 to November 20, 1894, both days inclusive.

The share transfer books of the CONSOLIDATED GOLD FIELDS OF SOUTH AFRICA (LIMITED) will be closed from the 7th to 22nd November, both days inclusive.

The first batch of letters of allotment to applicants for shares in the CARLYLE GOLD MINES (LIMITED) was posted on Thursday.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares Redruth, Cornwall, reports under date of November 1 (4 o'clock) as follows:—"Business has been dull in our market all the week, and there is but very little doing here to-day. The following are the quotations:—Blue Hills, 1s. to 3s.; Carn Brea, 5½ to 5¾; Dolcoath, 55 to 56; East Pool, 5½ to 6; Killifreth, 2½ to 2¾; South Condorow, ½ to ¾; South Crofty, ½ to ¾; South Wheal Frances, ½ to ¾; Tincroft, 9 to 9½; West Frances, 1 to 1½; West Kitty, 5½ to 5¾; Wheal Agar, ½ to ¾; Wheal Bassett, 1 to 1½; Wheal Grenville, 13½ to 13¾; Wheal Kitty (St. Agnes), 3s. to 5s.; Polberro, 1 to 1½.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (November 1) as follows:—"The mining market is without any noticeable feature, still presenting a dull and monotonous appearance; transactions being exceedingly limited. Tin is again firmer. Closing prices:—Carn Brea, 5 to 5½; Cook's Kitchen, ½ to ¾; Devon Consols, 1½ to 1¾; Dolcoath, 54½ to 55; East Pool, 5½ to 6; Killifreth, 2 to 2½ x.d.; Phoenix United, ½ to ¾; South Crofty, ½ to ¾; South Frances, ½ to ¾; Tincroft, 9 to 9½; West Frances, ½ to 1; West Kitty, 5½ to 5¾; Wheal Agar, ½ to ¾; Wheal Grenville, 14 to 14½.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers, and Mining Share Dealers, Redruth, write under date of Thursday, November 1:—"The market has been rather better this week since tin has turned, and transactions have been more numerous than of late, but business is still confined to very narrow limits, and it is very difficult to buy or sell any number of shares. Carn Brea, Tincroft, Killifreth, and West Kitty are firmer. Quotations herewith:—Blue Hills, ½ to ¾; Carn Brea, 5½ to 5¾; Dolcoath, 54 to 56; East Pool, 5½ to 5¾; Killifreth, 2½ to 2¾; Polberro, 1 to 1½; South Condorow, ½ to ¾; South Crofty, ½ to ¾; South Frances, ½ to ¾; Tincroft, 9 to 9½; West Frances, ½ to ¾; West Kitty, 5½ to 5¾; Wheal Agar, ½ to ¾; Wheal Bassett, 1 to 1½; Wheal Grenville, 13½ to 13¾; Wheal Kitty, ½ to ¾. Tin 68½.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write October 31, 1894 (4 p.m.):—"Owing to the usual 1st of November holiday we have to report on a week depleted by one day's business. Only a very moderate amount of business has been done during the period under notice. A portion of the time has been devoted to the completion of the settlement in progress when last we wrote, and the commencement of a 19 days' account with a holiday early on is not usually conducive to much new dealing, except there are elements of buoyancy in the market, such as are not present just now. Movements in the railway markets are somewhat irregular, and except in one or two instances are confined on both sides to small fractions. Home rails show changes about evenly divided between higher and lower. Lancashire and Yorkshire stand out amongst advances with rise of ¾, and North British on the other side with a fall of ¾, but beyond these the alterations only range from ¼ to ¾, and are mostly only ¼, with a very slight majority on the side favourable to holders. In Canadians, Pacifics are conspicuously lower, but Trunk issues are irregular on very small changes. Mexican rails furnish the instances of most variation on the week, having further declined, First Preference ½, Second Preference 2, ordinary 1½. Americans have seen-sawed about almost daily, and sometimes during the course of a day both here and on the other side. The limits of variation, however, have not been wide, and as for the most part advance of one day has been lost the next, or *vice-versa*, the balance of more on the week is not large. It is, however, nearly all on the downward side.—Higher: Atchison Income Bonds ¾, Milwaukee ¾, and Denver Preference ¾ to 1.—Lower: New York Central ¾ to 1, Erie, ¾; Ontario ¾, Louisville ¾, Union Pacific ¾, Ohio First ¾, and several others ¾. Consols do not exhibit any change from prices ruling a week ago. Notwithstanding that the Czar's illness shows no permanent improvement the course of prices in Colonial Government Bonds, &c., Home Corporation Stocks and Foreign Government Stocks is with slight exceptions in the last named, all to better figures. In Colonials, Natal Inscribed, New South Wales Inscribed, Queensland Inscribed, and Victoria Railway Inscribed are ½ better. In Corporation Stocks, &c., with—like the former—no contradictions the following are higher, viz., Douglas Three and a Half per Cent. 1½, Hull Three and a Half per Cent. 1, Birmingham Three per Cent. ¾, Nottingham Three per Cent. ¾, and Liverpool Three and a Half per Cent. ¾. Amongst Foreigners, Portuguese Three per Cent. and Spanish Four per Cent. are both ¼ lower, but these are the only declines to be noted, whilst the following are higher—viz., Brazilian Four and a Half per Cent., 2½; ditto, Four per Cent., 2; Italian Rentes, 1½; Argentine Six per Cent., 1; Russian Four per Cent., 1; Egyptian Unified, ½; and Turks and Uruguay ½ each. In miscellaneous classes of shares, beyond some repeated dealings in Adelphi and Salford Banks, Lancashire Insurance, Darien Mine, and Ship Canal issues, the transactions of the week have been desultory and reach but a meagre total. Though not without a respectable minority on the other side, the balance of movement on the whole is in favour of holders.

BANKS.—Little else done save in Salford and Adelphi.—Higher: Adelphi, ¾; District, ¾; and Union of Manchester, ¾.—Lower: Imperial of Persia, ¾; Bank of Liverpool, ¾; and Salford, 1-16.

INSURANCE.—Lancashire alone show more than isolated dealings, but as regards prices a good "turn round" as noticeable, as whilst only Maritime show any decline, and that only ¼, the following show advances—viz., Royal 1½, Liverpool and London and Globe ¾, British and Foreign Marine ¾, London and Lancashire 7-16 to ¾, Manchester Fire ¾, Lancashire ¾, Palatine 1-16, and Equitable 1s.

COAL, IRON, &c.—Scarcely anything doing.—Higher: Cammell's 1½, Rhymney 1s., and Tredegar A ½.—Lower: John Brown's ¾, Patent Nut, &c., ¾, and Sheepbridge A ¾.

COTTON SPINNING, &c.—Further strength has been exhibited, many quotations being several shillings in advance, which on the very low prices previously quoted means a large percentage rise on the week.

MINES.—Dariens quieter, but still marking several lots changing hands. Consolidated Gold Fields, too, have been done a few times. Higher—De Beers ¾. Lower—Darien A ½ to ¾. Tintos 3-16.

TELEGRAPHIC, &c.—Western and Brazil quote ¼ higher, but the following are lower, viz., Anglo pref. 3, ditto ordinary ¾ to 4, ditto deferred ¾, Direct U. S. Cable ½ to ¾, and Eastern Extension ¾.

BREWERIES.—Higher—Allsopp's 2, Farnham ¾, and Bents ¾. Lower—Manchester ¾.

MISCELLANEOUS.—Beyond dealings in Canals, business very straggling, and a poor total altogether. Suez Canal are 1½ and Liverpool Gas A 1, and Brunner Mond 2½ paid 1½ higher, but further than these changes are small and contradictory. Ship Canal issues have oscillated, and after being lower have ranged back to figures of a week ago.

SCOTCH MINING AND INDUSTRIAL COMPANIES
SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (November 1), writes:—During the past week the markets have been so active, although a considerable amount of business is still being done in South Africa. Trade reports show little alteration, and until there is some recovery in the prices of metals there is not likely to be general activity.

In shares of coal, iron, and steel companies a fair amount of business has been done. The principal dealings have been in Steel Company of Scotland shares (£9 paid), which declined to 15s. on fears of liquidation or reconstruction. A meeting of the principal holders was, however, held on Tuesday, when favourable statements were made as to the company's position and prospects, and a considerable amount of debentures promised to be subscribed for to carry on the concern. The shares recovered to 45s., and are now about 41s. 6d. Bolckow Vaughan are at 12, Fifeshire Main Collieries 21s. 6d., Marbella 61s., Niddrie 42s. 3d., and Wilson's and Clyde new shares (5s. paid) 81s. 6d.

In shares of copper concerns there has not been much business doing. Arizona are lower at 8s., but Tharsis and Tinto are firmer. The last-mentioned touched 15 7/16, but probably from being an international stock, and thus affected by the adverse reports of the Czar's health, it has dropped to 15.

In shares of gold and silver mines a considerable business has been done. Montana declined from 14s. 9d. to 13s. on the statements at the meeting that the returns up till March might be smaller; however, a dividend is probable at the end of the year. Broken Hill declined from 50s. 6d. to 44s. 9d., recovered to 50s., and are now 47s. 9d. There have been conflicting reports about state of the mine. The latest information obtained by the *Glasgow Herald* by cable points to lower prices for the shares, as the returns are expected to fall off through exploration work becoming necessary. The Mysore interim dividend, 1s., is disappointing, as it compares with 3s. 6d. at this time last year. A dividend of 3d. is payable on Victoria Charters Towers shares on November 7. Most attention has been paid to South African descriptions, especially Deep Level properties, some of which show a considerable advance compared with recent prices, and it is probably worth the attention of holders whether they should not secure profits on at least some of their holdings now. Nouveau Monde wanted. African Gold Recovery shares have been less excited after the previous week's fluctuations, and show a recovering tendency at 33s. 6d. Alexandra Estates are at 6s.; Bayley's Reward, 20s. 6d.; Bechuanaaland, 25s.; Buffelsdoorn, 33s.; Bulawayo Syndicate, 17s. 6d. prem.; Cassel, 16s. 6d.; Consolidated Gold Fields of South Africa, 54s. 6d.; Champ d'Or, 55s.; Crown Reef, 9s.; Consolidated Deers, 57s. 6d.; Durban, 5 11/16; De Lamar, 24s. 6d.; Day Dawn P.C., 6s. 6d.; East Rand, 24s.; Golden Gate (California), 3s. 6d.; Glencairn, 47s. 6d.; Goldenhuis Deep, 5s.; Gold Fields Deep, 47s.; Henry Nourse, 80s.; Jubilee, 6s.; Kabaonga, 1s. 9d.; Knight's, 37s. 6d.; Klerksdorp Estates, 3s.; Jumpers, 5s.; Lisbon-Berlyn, 2s. 9d.; Macate, 3s. 3d.; May, 26s.; Mallina, 19s. 6d.; New Guston, 17s. 6d.; New Primrose, 5s.; New Cross, 32s. 6d.; Ophir, 2s.; Otto's Kopje, 2s. 9d.; Orion, 60s.; Paarl Central, 23s.; Roodepoort Deers, 40s.; Rand, 15s.; South African Gold Trust, 35s. 6d.; Sutherland Reef, 15s.; Sheba, 29s. 9d.; Victoria and Altamira First Pref., 1s. 6d. to 2s.; Van Ryn, 54s.; West Mallina, 2s. 6d. to 3s.; West Australian Mining, 10s.; Wolhuter, 65s.; and Zambesia Exploring, 66s. 3d.

In shares of miscellaneous companies there is no particular alteration to notice, except a slight improvement in oil shares, Broxburn being up to 8, Pampherton 5s., Young's 20s., and Nobel's Explosives 14s.

EDINBURGH.

Messrs. THOMAS MILLER and Sons, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of Oct. 31:—Railway ordinary stocks are generally lower, but the decline is un-

important except in the case of Highland, which has fallen from 117 to 112 1/2. Caledonian Deferred has declined from 39 1/2 to 38 1/2, North British from 36 1/2 to 35 1/2, Chatham from 15 1/2 to 15 1/4. Canadiana dull. Royal Bank has improved from 225 1/2 to 228. Insurance shares higher. British and Foreign have improved from 23 1/2 to 23 9/16. Commercial Union from 33 1/2 to 33 1/2, Lancashire from 5 1/2 to 5 1/2. Liverpool, London, and Globe from 46 1/2 to 47, London and Lancashire from 16 1/2 to 16 1/2, Northern from 67 to 67 1/2, Royal from 50 1/2 to 51 1/2, Scottish Accident from 40s. to 42s. 6d., Scottish Imperial from 30s. 9d. to 31s. 3d., Scottish Metropolitan from 37s. 6d. to 38s. 6d., Standard from 61 1/2 to 62 1/2, Scottish Union and National A are 6d. cheaper at 86s., British South Africa shares are 2s. higher at 37s. There was a heavy fall in Steel Company shares from 35s. to 15s.; but the market has turned, and they have gone up to 42s. 9d. There has been a good deal of business in some gold and silver shares. African Gold Recovery have fallen from 36s. 3d. to 32s. 3d., Broken Hill from 49s. to 48s. 9d. The following are the last prices of Deposit Receipts of Reconstructed Australian Banks, viz., Australian Joint Stock 16s. 3d. per £, Bank of Victoria 16s. 6d., City of Melbourne, 12s. 3d., Commercial Bank of Australia 13s. 6d., London Bank of Australia 17s. 3d., National Bank of Australia 17s. 6d., Queensland National Bank 15s. per £.

MINING IN CORNWALL
AND DEVON:

NOTES ON MINING IN THE WEST.

(BY OUR SPECIAL CORRESPONDENT).

THE Devon and Cornwall Miners' Accident Fund committee met again at Camborne on Monday, when the principal business was the laying down of the basis on which the trust deed is to be framed. The President, Mr. G. J. Smith, mentioned during the meeting that he had received a communication in which exception was taken to the delay in getting the fund into actual operation. Mr. Smith defended the Fabian tactics of the committee, pointing out that they had a definite scheme to follow, and that until the organisation was complete they could not proceed to distribution. Although there may be something in Mr. Smith's explanation, there is a feeling in the minds of many people that the committee have been somewhat dilatory over their work, and that the organisation might have been perfected months ago. But the chief point in the discussion on Monday had reference to an ingeniously worded promise to the effect that in the event of an Employers' Liability Bill on similar lines to that rejected last Session, the practicability of continuing the fund should be brought before the committee by the trustees. Colonel Fludger, who, by the way, is the Chairman of Mr. Conybeare's committee, strongly opposed the proviso on the somewhat curious ground that if the Bill was passed the miners would not take advantage of it. It may be admitted that, in all probability, the unorganised miners of Cornwall and Devon would not avail themselves of the right of litigation which they would have under such a measure to the extent that the coal miners, with their Unions behind them, most certainly would; but there is absolutely no guarantee that they would in all cases refrain from going into Court. In this connection the recent claim made by a beneficiary of Wheal Owles Fund should be borne in mind. The position with regard to the fund is that the subscribers to it are very largely also adventurers in the mines, and can scarcely be expected to pay more than the insurance and their contribution to the Relief Fund.

KILLIFRETH meeting on Tuesday was satisfactory. A profit of £438 was shown on an average price of tin £1 below that of the last quarter, and a dividend of 1s. 6d. per share was declared, as against 2s. last time. The shareholders have very great reason to congratulate themselves that the mine is opening up so well, and is being so efficiently managed as to return a profit under the present adverse conditions of mining. They are evidently going in for still more rapid development of the mine, a policy which ought to be attended with profitable results. They have a large quantity of tin ground below the 70 which they will be able to stop when they get under it, and in addition to this, it is eminently desirable that the shaft should be rapidly sunk so as to enable them to open out on both the middle lode and the old lode. This, one would think, was scarcely the time for increasing salaries in Cornish mines, but the shareholders on Tuesday decided to increase the salary of Captain James, the manager, to 12 guineas a month.

THE decision of the Vice-Warden in the Wheal Grenville South Condurow encroachment here is still attracting a considerable amount of public attention; but there seems to be a wonderful unanimity of opinion as to the justice of the finding. Messrs. Henderson have seen fit to publish a letter in which they endeavour to explain away misunderstandings which they imagine have arisen; but, in spite of this, the fact remains that the Vice-Warden has found against their plans, on which the Wheal Grenville case mainly rested. A good deal of comment was made during the trial on the remarks of Mr. James Henderson, who was the dialler for both mines, that the working plans of the mines were not to be considered strictly accurate and reliable; and, in the letter before referred to, the firm endeavours to justify, and, at the same time, somewhat modify, this assertion. Those who have the direction of the management of mines will scarcely share Mr. Henderson's opinion, for the working plans are, practically, the only plans which the executive of a mine have to guide them as to whether they are driving 100 fathoms from a boundary, or only a few feet. Messrs. Henderson are among the most experienced mine surveyors in the West of England, but the ablest experts occasionally make mistakes, and we have it on high authority that the man who never made a mistake never made anything.

WE hear that there is a probability of West Frances proceeding against Wheal Grenville with a claim for encroachment. The line of boundary of South Condurow extends also between West Frances and Grenville.

WE hear that Captain E. R. George, of Redruth, has secured a lucrative appointment with a London firm as their manager of some gold and silver mines in the Republic of Honduras. Captain George has had a varied experience abroad both in gold and silver mines, and his capabilities, coupled with his experience of the past, fully warrant his holding such a responsible position. Some 10 years ago he was a very successful student in the Science Schools at Redruth, and we are quite sure the good wishes of a large circle of friends accompany him.

BLACKETT's claim is reported to be turning out very well. The reef is 6 feet wide, and the stone will probably average from 4 1/2 ounces to 5 ounces.

THE *Dunottar Castle*, which sailed from the Cape on Wednesday for England, brings gold to the value of £32,000.

THE following are the gold statistics for the Bendigo and Ballarat districts for the fortnight ending October 27:—Bendigo, total yield, 6500 ounces; dividends declared, £2975. Ballarat, total yield, 6989 ounces; dividends declared, £6125.—*Reuter*.

METAL TRADE STATISTICS.
OCTOBER, 1894.

COPPER.

(From Messrs. Henry R. Merton and Co.'s Circular for October 1894)

	Oct. 31, 1894.	Oct. 15, 1894.	Sept. 30, 1894.	31st OCTOBER.		
				1893.	1892.	1891.
STOCKS IN ENGLAND AND FRANCE:—	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Liverpool and Swansea, Chili Bars	35,329	35,092	34,732	29,054	30,217	23,247
" " " " " " " "	818	823	828	100	149	144
" " " " " " " "	37	31	25	611	330	25
" " " " " " " "	6,562	6,407	6,548	5,310	5,309	9,127
" " " " " " " "	5,320	5,452	5,191	4,799	5,274	9,120
London (including landing)	80,492	79,876	79,759	80,000	80,000	80,000
Stocks of fine Copper in Havre, Rouen, Bordeaux and Dunkirk	572	577	562	4,118	3,840	12,452
ADVISED FROM CHILI by Mail and Cable, Fine Copper	49,038	48,682	48,264	43,990	52,128	54,115
" " " " " " " "	2,850	3,300	2,500	3,150	3,050	4,200
" " " " " " " "	900	1,000	850	900	900	1,500
Price of Chili Bars and G.M.B.'s per ton	£40 15 0	£40 7 6	£41 10 0	£42 2 6	£45 12 6	£46 5 0

COMPARATIVE STATEMENT.

	Stock in England and France and Afloat there to from Chili and Australia.	Price of G.M.B.	Arrivals				Charters from Chili to Europe.	Shipments from Australia to London.	Total Supply.	Total Deliveries.
			England and France.	Other European Ports.	Spain and Portugal (excluding Pyrites).	Other Count's.				
Month ending	Tons.		Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
31st October, 1894	52,788	£40 15 0	2,849	3,779	1,334	1,088	1,850	600	11,520	10,766
30th September	52,034	41 10 0	1,806	3,630	909	1,573	1,530	450	9,868	10,241
31st August	52,407	40 7 6	3,428	4,641	1,454	3,973	2,000	550	15,604	14,602
31st July	51,325	38 2 6	3,455	2,365	1,309	1,816	1,800	550	17,182	16,402
30th June	47,580	38 5 0	2,726	2,945	825	3,522	2,200	550	13,001	10,509
31st May	46,806	39 17 6	3,559	2,811	1,076	3,023	1,650	550	12,936	12,162
30th April	46,897	40 15 0	3,548	3,096	1,164	1,699	1,500	550	10,575	11,342
31st March	47,364	41 0 0	3,08	3,276	647	764	1,950	550	10,385	10,173
28th February	47,152	41 0 0	4,921	2,869	1,477	890	1,350	550	11,947	12,090
31st January	47,295	42 15 0	3,048	4,252	1,487	852	2,700	550	13,639	13,371
31st December, 1893	46,827	43 0 0	6,146	4,385	1,332	5,694	1,400	450	19,400	20,613
30th November	46,827	43 0 0	6,146	4,385	1,332	5,694	1,400	450	19,400	20,613
31st October, 1893	46,040	42 2 6	7,097	6,575	909	3,081	2,200	1000	20,653	20,517
30th September	47,904	41 17 6	7,940	3,971	1,255	421	1,700	600	18,087	16,144
31st August	47,961	41 12 6	4,272	2,188	1,536	1,435	1,200	400	10,940	12,462
31st July	50,463	41 12 6	4,272	2,188	1,536	1,435	1,200	400	10,940	12,462
30th June	49,955	43 10 0	1,914	2,210	1,958	2,548	1,850	550	11,130	11,126
31st May	49,061	43 3 6	3,179	967	1,391	1,571	1,750	450	8,928	11,071
30th April	52,094	44 10 0	2,821	906	799	1,684	1,600	550	7,459	10,636
31st March	55,271	45 0 0	1,312	687	1,877	3,391	850	600	9,417	10,566
28th February	57,420	45 12 6	1,821	632	1,170	2,785	3,000	450	9,559	10,945
31st January	56,507	45 2 6	3,268	455	1,452	4,899	1,000	700	11,773	9,011
31st December, 1892	56,745	46 17 6	3,255	842	2,555	3,006	1,500	300	12,236	9,991
30th November	55,498	47 17 6	2,832	623	690	1,225	1,500	700	8,062	10,640
31st October, 1892	56,078	45 12 6	752	850	782	2,221	1,680	800	7,436	9,840
30th September	56,482	44 2 6	1,046	825	1,619	2,315	1,750	400	7,667	9,953
31st August	56,718	44 7 6	3,857	224	965	3,583	1,900	400	9,059	9,079
31st July	56,738	44 17 6	2,893	590	2,148	3,744	2,200	600	12,623	8,889
30th June	56,604	44 17 6	2,909	416	2,042	4,746	1,600	200	12,315	9,476
31st May	53,985	46 7 6	2,841	664	2,788	1,215	2,150	500	9,858	9,521
30th April	53,828	45 12 6	1,968	1,294	2,482	3,968	1,200	300	10,242	10,725
31st March	54,311	46 0 0	2,860	1,667	2,012	3,013	1,750	200	9,002	12,472
28th February	56,781	46 5 6	2,852	495	6,734	3,277	2,800	300	9,686	8,789
31st January	57,482	44 12 6	2,899	892	350	1,571	1,555	350	7,398	6,480
31st December, 1891	56,044	46 15 0	1,720	1,575	2,049	3,305	1,200	600	10,449	12,825
30th November	57,620	44 12 6	2,007	1,417	872	3,225	2,050	400	8,571	10,746
			26,356	10,510	19,094	30,493	21,275	4,400	113,378	117,115

† Including Chilean and North American for all Europe.

TIN.

(From Messrs. A. Strauss and Co.'s Circular for October 1894).

	31st Sept. 1894.	31st Oct. 1894.	31st Oct. 1893.	31st Oct. 1892.
	Tons.	Tons.	Tons.	Tons.
Straits and Australian spot	8,096	8,377	2,770	1,871
Litto ditto landing	855	1,086	903	1,200
Straits, afloat	3,600	2,775	2,925	2,065
Australian, afloat	754	722	932	937
Banca, on Warrants	13,435	12,960	7,535	6,173
Billiton, spot	1,473	514	287	524
Ditto afloat	1,765	1,762	551	252
Straits, spot in Holland	1,060	1,240	1,265	1,750
	610	590	445	255
Total afloat for United States	18,326	17,396	10,103	9,252
Estimated stock in America	2,170	1,575	600	1,950
	2,045	2,045	2,525	3,660
Total	22,543	22,006	14,228	14,862
Prices of Straits and Australian	£71 2 6	£68 0 0	£76 15 0	£74 0 0
Deliveries during the month in London	1,444	1,571	1,588	1,037
Ditto ditto Holland	548	1,005	845	842
	1,992	2,576	2,433	1,879

Shipments during the month from Straits to London

	During 12 months ending Oct. 31, 1894.	During 12 months ending Oct. 31, 1893.	During 12 months ending Oct. 31, 1892.	During 12 months ending Oct. 31, 1891.	During 12 months ending Oct. 31, 1890.
	Tons.	Tons.	Tons.	Tons.	Tons.
Shipments from Straits to London	27,002	25,640	15,798	16,648	16,556
Shipments from Straits to America	6,666	5,330	9,073	10,972	6,740
Shipments from Straits to Continent	12,403	8,138	5,755	4,240	5,970
Ditto from Straits to Europe and America	49,465	39,098	30,623	31,900	27,266
Shipments from Australia to London	4,339	4,342	4,529	4,548	5,229
Shipments from Australia to America	850	300	750	650	905
Deliveries of Tin in London	18,607	17,751	14,764	17,777	16,240
Deliveries of Tin in London and Holland	26,967	25,430	23,062	26,282	23,770
Ditto in London, Holland, France, and U.S.	54,445	52,585	46,028	47,242	42,487

Balcan in Trading Company's hands and afloat, 6380 tons.

Fuscas; Straits and Australian, spot ... £68 0 0 three months ... £68 5 0

English Common Ingots ... 70 10 0 refined ... 72 10 0

Banco ... 68 10 0 Billiton ... 67 15 0

C. PASS & SON (Limited), BRISTOL,
 ARE BUYERS OF
 LEAD ASHES, SULPHATE OF LEAD, LEAD SLAGS,
 ANTIMONIAL LEAD, COPPER MATTE, TIN ASHES, &c.
 and DROSS or ORES containing
 TIN, COPPER, LEAD, AND ANTIMONY.

PACIFIC MINING AGENCY AND TRUST COMPANY.

A Corporation organised under the Laws of the State of California.
 CAPITAL STOCK, £50,000.
 BOARD.

IRWIN C. STUMP (Chairman), Manager of the Estate of the late U.S. Senator Hearst.
 IRVING M. SCOTT, Manager Union Iron Works.
 JACOB H. NEFF, President California Miners' Association.
 P. N. LILIENTHAL, Manager Anglo-California Bank (Limited).
 W. F. GOAD, Vice-President, Wells, Fargo, and Co.
 D. M. BURNS, Capitalist.
 R. C. CHAMBERS, Manager Ontario Mine, Utah.
 WILLIAM C. BALSTON, Secretary (Secretary California Miners Association).
 BANKERS—The ANGLO-CALIFORNIAN BANK (Limited).
 HEAD OFFICE—MILLS BUILDING, SAN FRANCISCO, CAL.

THIS COMPANY sells Mines, Mining Claims, Ditch Properties, and Water Rights ON COMMISSION, and will act as Agent and Broker for the Sale and Purchase of such Properties.

It is intended to conduct the Purchase and Sale of Mining Claims, Ditch Properties, and Water Rights on the same basis as a real estate transaction.

The Company is prohibited by its Articles of Incorporation from buying or selling on its own behalf, or except upon commission, or as agent or factor for others.

The buyer pays no fees whatever, and there is no incentive to advance the price beyond the original figures at which the price and commission have been agreed upon with the seller.

It is not intended only to negotiate the sale of an entire property but interests in such may be sold or money obtained for development work.

This Company especially solicits the business of making reports or examinations for non-resident mine owners on any of their mines in the United States, and obtaining special information as to their condition and so forth (said reports being confidential).

Those who conduct the business of the Company have had long experience in mining operations, and it is their intention to place the Company in a position to inspire the confidence of all who seek its assistance in its integrity and fair dealing.

We respectfully refer to any Bank in the City of San Francisco and to the Anglo-Californian Bank (Limited), London, as to the standing of the Board of Directors of this Company.

Descriptions of properties for sale with maps, reports and all necessary information, are left on file in the office of the Company. Abstracts of such reports with prices of mines will be furnished upon application.

California has produced £267,000,000 in gold, and is still producing £2,680,000 a year. There are thousands of claims requiring capital for development. In other Pacific Coast States and Territories there are abundant opportunities for investment in mines of gold, silver, copper, lead, coal, and so forth. Information concerning these will be furnished by this Company on application.

This Company will also furnish competent engineers, superintendents, foremen, miners, millmen, assayers and others connected with the mining industry on application, furnishing their references and so forth.—Cable Address, "CHAPIN," San Francisco.

THE BUTE WORKS SUPPLY COMPANY, CARDIFF.

Telephone: No. 45 (Post Office and National).

Telegrams: Gething, Cardiff.

WAGONS.—New to Latest Regulations, 50 with one end two Side and two Bottom Doors, Wheels with WROUGHT Bosses, large capacity (12 inches longer and 4 inches deeper than usual), ready for Lettering. New to Latest Regulations, one end and two side doors, sides and ends 3 inch red deals, all inside under-frame timbers of English oak; delivery, about 15 per week, commencing forthwith. 50 End Tip 10-ton Coal Wagons to New Regulations, equal to new, prompt delivery.

LOCOMOTIVES.—One good second-hand Saddle Tank Loco. six wheels coupled, ready for instant work, and cheap for cash or three years' purchase-lease. 14 inch cylinders, by Avonside Engine Company, now near Cardiff.

RAILS.—Bridge, 14 to 120 lbs. per yard; Flange, 10 to 100 lbs. per yard; Double Head, 30 to 82 lbs. per yard; and Bull Head, 50 to 96 lbs. per yard.

SLEEPERS.—Wood, Iron, and Steel. A quantity of Metre Gauge Steel Sleepers for Sale, Cheap. 1400 new Baltic redwood sawn rectangular, 8 feet by 8 inches by 4 inches at 1s. 3d. each net f.o.t. Cardiff.

PORTABLE RAILWAY.—£9 18s. 9d. per 100 Yards of Railway (Steel Rails, 14 lbs. per yard, and Iron Sleepers), complete.

EARTH WAGONS.—75 side tipping 30-inch gauge, STEEL wheels and STEEL axles, £5 each, f.o.t. Cardiff.

BRICKS.—Fire and building bricks, also clay.

WE are instructed by the MOUNT LYELL MINING and RAILWAY COMPANY (LIMITED), of Tasmania, to INVITE TENDERS from

SMELTERS or their AGENTS

for the undermentioned parcels of RICH ARGENTIFEROUS COPPER ORE lying at Messrs. Richardson's and Co.'s Ore Wharves, Swansea, and we shall be glad to forward sealed samples of the various lots on application.

Tenders must be lodged at this Office not later than 2 p.m. on Monday, the 19th of November, 1894, stating the price per ton of 20 cwt. (dry weight) for each lot of the Ore, including Copper, Silver, and Gold contents, without any draft or deductions whatever. Moisture, if any, to be taken at the time of delivery.

The Ore to be packed and taken from the Wharf on Warehouse Weights by the Buyer, at their risk and expense, within seven days after the Sale.

Payment to be made by good and approved Bills at two months' date, or in Cash, less Discount at Bank Rate, at Seller's option.

Should two or more Buyers offer the same price, such being the highest bid, the Ore to be equally divided between them.

It is intended to accept the highest Tender, but we reserve to ourselves the right of declining to sell.

VIVIAN, YOUNGER, and BOND,
 117, LEADENHALL STREET, LONDON, E.C.
 PARTICULARS.

	Lot 1 weighing about	Tons cwt.
ex ORIENT (s)	" 2 "	4 3
	" 3 "	4 3
	" 4 "	4 0
	" 5 "	4 0
	" 6 "	3 10
	" 7 "	3 10
	" 8 "	5 9
	" 9 "	2 14
	" 10 "	2 3
	" 11 "	2 2
	" 12 "	2 4
	" 13 "	2 10
	" 14 "	2 7

HENRY WIGGIN & CO. (Limited),
 NICKEL AND COBALT REFINERS,
 MAKERS OF BEST RED LEAD FOR FLINT GLASS
 MANUFACTURERS,
 BIRMINGHAM.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

An Illustrated Record of Mining, Metallurgical, Railway, Financial, Industrial, and Engineering Progress.

ESTABLISHED IN 1835.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, published every SATURDAY MORNING, price SIXPENCE, is recognised throughout the World as being the oldest, most influential, and most widely circulated Journal devoted to the interests which it represents. It circulates

ALL OVER THE WORLD.

Amongst Mine Owners, Capitalists, Investors, Mining, Metallurgical, Railway and Mechanical Engineers, Railway Administrators, Manufacturers, &c., &c.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE will also be found at leading Clubs, Hotels, Exchanges, Public Reading Rooms and Libraries, and British Consulates throughout the World. It has also correspondents and sources of information in almost every quarter of the globe. Its policy is absolutely independent; its circulation is cosmopolitan; and its literary scope embraces the entire field indicated by its title.

TO CORRESPONDENTS.—Letters on Editorial Matters, or containing literary contributions should be addressed to "THE EDITOR." All matter intended for insertion must be written on one side of the paper only. The return of rejected manuscripts cannot be guaranteed. The Editor invites correspondence and items of news or information from readers in all parts of the World.

TO SUBSCRIBERS.—The Annual Subscription to THE MINING JOURNAL, including postage to any part of the United Kingdom, is £1 4s. Abroad, £1 8s. payable half-yearly in advance. It can be purchased at all Railway Bookstalls and Newsagents throughout the United Kingdom for 6d.

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Displayed (Trade) Advertisements of 2 inches in depth (or more), Single Column measure, will be inserted at the following rates:—For 52 insertions 2s. 6d. per insertion for each inch in depth; for 26 insertions 3s. per insertion for each inch in depth; for 13 insertions 3s. 6d. per insertion for each inch in depth. Terms for special positions and contracts may be had on application.

ADVERTISEMENTS (which should in all cases be sent direct to THE MANAGER) can now be received for the forthcoming issue of THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE, on FRIDAY, at 18, FINCH LANE, E.C., up till 6 p.m., and at 3, DORSET BUILDINGS, SALISBURY SQUARE, E.C., until 9 p.m.

THE MINING JOURNAL is neither controlled, nor is any interest in it held or exercised, by any mine owner, speculator or syndicate, and it is in no way connected with any share dealing agency. The position occupied and the views expressed by it are alike absolutely independent.

Editorial and Advertisement Offices:

18, FINCH LANE, LONDON, E.C.

Telegraphic and Cablegraphic Address: "TUTWORK, LONDON."
 Codes used: "A.B.C.," "Moreing's," and "Universal."

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LONDON: NOVEMBER 3, 1894.

THE COST OF GOLD MILLING.

THERE are so many factors which enter into the question of the cost of gold milling that we treat the subject with a certain reserve, knowing from personal experience how impossible it is to lay down any general rule which would apply equally well to all mines and all districts. The ore itself varies with each mine so that the duty per stamp, and the wear and tear of the mill, consequent upon the friability or otherwise of the rock is also varied, while the question of motive power is

also one which enters largely into the estimate of cost. Steam is, of course, the most costly, and varies with the cost and heating power of the fuel employed. Water, when it can be obtained for nothing, is the opposite extreme, and is the ideal motive force. Usually, however, this has to be paid for at so much an inch, the price varying according to the locality. Hitherto it has been the practice to convey the water to the mill along miles of sluice or piping, and there convert it into power, a proceeding entailing considerable loss from leakage and friction in the pipes, in addition to the interest on the capital sunk in the construction. Of late years electricity as a motive power has come to the fore, and we know of cases where it has supplanted the old system of purchasing water and conveying it in pipes, which necessitated the mill being at a lower elevation than the source of water power. The electric generating plant can be erected miles away and either above or a few thousand feet below the level of the mill at any convenient point on a stream where water rights can be obtained, and the current conveyed thence on a line of insulated copper wires to the electro-motors in the mill to be once more converted into power.

Another factor in the question of cost is that of labour, and this is the more important because of the fact that it is skilled labour which must be employed, and this is always more expensive in proportion, as the unskilled or native labour is cheap. The customary rate of wages in the district, the length of time worked per day, and accessibility of the mine, as well as climatic conditions, all have a direct bearing on this point, and have also to be considered in estimating the probable cost per ton. The situation of the mine also as regards transport facilities, its distance from the sea or rail, and the sources of supplies for the different materials needed for the maintenance and repairs of the machinery, are all matters bearing on the case; while last but not least, as regards importance, is the size of the mill, for whether it be a 10 or a 60 stamp mill the number of hands employed and the cost of management will be the same, or fixed charges, so that the cost of milling per ton of ore will be some six times greater in a small mill than in a large one. In some districts the mining companies do not mill their own ore, but send their productions to what is termed a "customs" mill, just as small farmers send their corn to be ground in a batch mill. It is, of course, difficult to get at the exact cost of the operation of milling in these mills, as the proprietors naturally do not encourage enquiry. The following, however, are the prices usually paid per ton of ore milled in some of these mills. In Gilpin County, Colorado, where steam is used, the charge is \$3 per ton of 2000 lbs., or say 9s. per ton of 2240 lbs. In Nova Scotia, where fuel and labour are cheap, the price is about 5s. per ton, in Australia 7s., and New Zealand 10s. The variation in these figures is sufficient to emphasise the remarks we have already made as to the influence of local conditions and the nature of the ore upon the question of the cost of milling. Where the ore permits of it, the process of free milling in a well-arranged mill is the cheapest in use for gold extraction, so that low grade ores can be worked to a profit, as in the Black Hills, where \$4.00 ore yields good returns on mining and milling; the cost of the latter not exceeding 60 cents per ton of ore. In California, under very favourable circumstances, an ore yielding only \$1 per ton is worked to a profit, the ore being quarried rather than mined, and the actual cost of milling by use of HUNTINGTON mills and water power did not exceed 60 cents per ton. We know, also, of a case in Eldorado County, California, where the ore was mined and milled for a cost not exceeding 2s. per ton. The ore deposit, however, had a width of 150 feet, and consisted of porphyry with quartz strings all much decomposed, the whole mass being loose and easily worked with pick and shovel. The mining was done at a fixed charge of 7½ cents, or, say, 4d. per ton, and the stuff was then trammed to the mill, where the plant consisted of 10 stamps and three HUNTINGTON mills. The ore was free milling, and gave on an average \$2 worth of gold per ton, so that there was a good margin for profit. In this case the motive power was electricity, but, of course, the extreme friability and the enormous mass of the ore, where very important factors towards successful working. In our own country the only gold mine which has ever been worked on an important scale is the well-known Morgan Mine, near Dolgelly, in North Wales. The modern mill at this mine is a fine specimen of mill construction, and after the introduction of water as a motive power the cost of milling fell below 1s. per ton. The results of a run of 504 hours with 40 head of stamps, crushing at the rate of 1'37 ton per stamp per 24 hours, making a total of 1150 tons crushed during the run, were as follows: labour 10d., and for material 1½d., or a total of 11½d. as the milling cost per ton. Before leaving the free milling ores, or rather those in which only the free gold is recovered, we will consider the cost of milling at the Sunlight Gold Mining Company's mill, West Hillgrove, New South Wales. The battery consists of 40 head of stamps, and hitherto no concentrators have been employed. The ore carries antimony, and contains an average of 18 dwts. 9 grains of gold per ton. Of this amount 8 dwts. 5 grains of free gold are recovered by amalgamation and 10 dwts. 4 grains are lost in the tailings, of which 9 dwts. are non-amalgamable, and 1 dwt. 4 grains are free. It will be seen, therefore, that the amount lost is greater than that recovered, and steps are now being taken to put a stop to this loss by the use of concentrators. The whole of the cost of milling, therefore, has to be borne by the free gold recovered. The mill is driven by steam, and hitherto the feeding of the batteries has been done by hand, though automatic feeders are now being erected. During the first six months of this year the total amount crushed was 8237 tons, and the actual cost of milling this amounted to 4s. 11'839d. per ton. The accounts have apparently been exceedingly well kept, so that we are able to give the items of cost both for mining, milling, and management to a decimal of a penny. In view of the attention which is at present being paid to mining in Australia, the information thus afforded is of considerable value at the present moment, and so

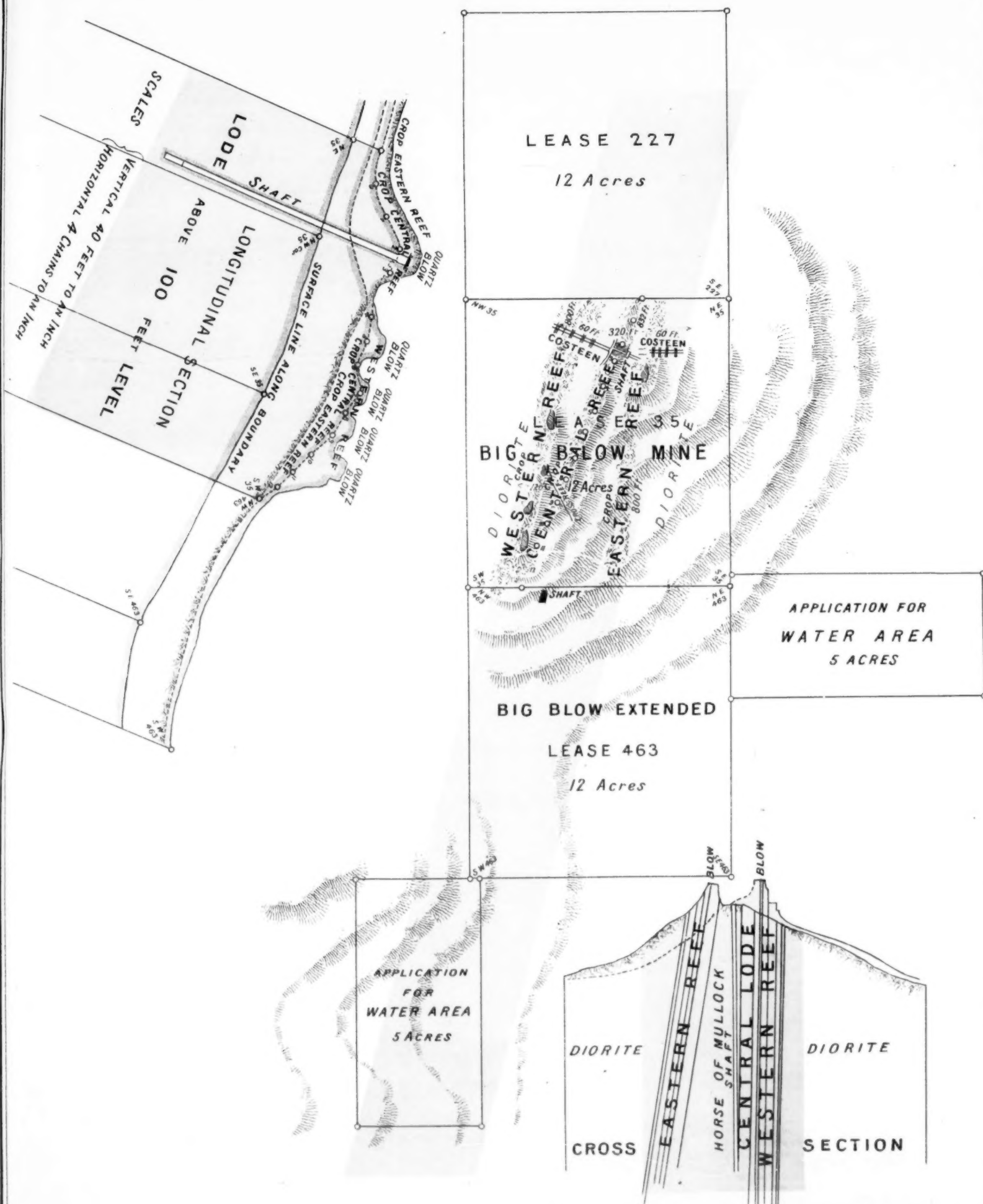
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SUPPLEMENT TO THE MINING JOURNAL, RAILWAY & COMMERCIAL GAZETTE,
SATURDAY, NOVEMBER 3, 1894.

PLAN OF PROPERTIES OF BIG BLOW GOLD MINES, LTD.



After comparing this Plan with "BIG BLOW PROPERTY"
I hereby certify to its correctness.

M. Matthews

Manager Bayleys Reward G.M. Co^{rs}

COOLGARDIE, 7th July, 1894.

we give a summary of the direct and indirect expenses per ton of quartz as follows:

	Average per ton.	s.	d.
Mine.—Stone getting, including labour and supplies	10	9	316
Development	3	3	666
Tramway expenditure	1	1	279
Battery	4	11	839
Renewals and repairs	0	6	661
Depreciation of plant	0	7	930
General.—Mine salaries, material, &c.	1	8	875
Administration Sydney offices, &c.	0	11	218
Rent and royalty	3	1	729
Plant and construction	3	2	614
	£1	10	4
			197

Passing now to the consideration of the cost of milling, when concentrating machinery is employed, we will take as an example the mill of the Montana Company, erected at Marysville, Montana. This mill has 60 stamps, and the gold not caught on the plates is recovered in the form of concentrates by means of 24 FINE vanners. The mill is driven by a compound CORLISS engine, the steam for which is supplied by two horizontal tubular boilers, arranged in one nest, and so connected that they may be run together or separately. With a view to minimising the delay which might arise from an accident to the mining machinery preventing the delivery of ore to the mill, special reserve ore bins were erected above the crushers, and these being always kept full of ore, served as a store for supplying the mill during repairs to the mine. During the year 1888 the amount of ore crushed and milled was 40,530 tons at an average cost of \$1.13 per ton, and this low figure, which includes wear and tear as well as incidental expenses, is doubtless due to the perfect type and automatic arrangement of the machinery employed. The Alaska Treadwell mill is another example of the successful treatment of large quantities of low grade ore containing gold to the value of 12s. 2½d. per ton. This mill has 240 head of stamps with a duty of 2.9 tons per head per 24 hours. The motive power is steam, and the total milling costs, including labour, materials, repairs, and maintenance on an amount of 237,235 tons, came to an average of 1s. 10d. per ton when running with water, and rose to 2s. 9d. per ton when steam was used. In South Africa the cost varies considerably, and ranges from 10s. 2½d. at the Sheba Gold Mine, with water power down to 3s. 3½d. at the Block B Langlaagte Estate, where steam is used, while at the Langlaagte Estate, with 120 stamps driven by steam, the cost is 3s. 8½d. per ton; the tons in these and the American mills being short tons of 2000 lbs. The Indian gold mines seem to have adopted the most expensive form of milling for here we find that in the Mysore district the cost per ton rises to 14s., and in the Nundydroog at 8s. 6½d. per ton of 2240 lbs.

As in all other businesses, much depends upon the management; if this is careless and slovenly the costs will run up, but if it is careful and economical, the average will be low. The machinery in a gold mill is not of intricate nature, and consequently accidents and breakages are rare, and are generally confined to the stems, shoes, shanks and screens. The wear and tear is felt by the screens, shoes, dies, battery linings, and the jaws of the rock breakers, and a reserve supply of these articles should be kept in store, so that no delay may arise when replacing them. The cost of a complete mill depends largely upon the position in which it is to be erected, and the quality of the machinery ordered, so that it is impossible to give but a rough idea as to this. About £200 per stamp would usually cover everything, including engine and boiler, as well as concentrating appliances if the number of stamps exceeds 20. Excluding the motive power and mill buildings, the cost would be about £100 per stamp head, but, as we have already said, these figures are but roughly approximate. We know from experience that there are mills and mills. Provided that the gold is in the ore, then by far the best policy is to go to a good manufacturer, pay a good price, get good machinery, secure the services of a good manager, and thus take all the measures necessary to ensure good results.

NOTES AND COMMENTS.

AS we took occasion to remark last week, there is at present a lull in the flotation of West Australian companies. Investors may rest contented, however, that this is merely temporary. This week they have been invited to subscribe to 20,000 shares at par in Bayley's West Extended, the property which, we are informed, "almost immediately" adjoints the Bayley's Reward. This is a phrase, the meaning of which we cannot quite grasp. In fact, it may mean anything; but a would-be investor hurriedly reading it would come to the conclusion that it is really neighbouring. The wealth of Bayley's Mine has been so frequently dangled as a bait to allure the unwary shareholder, that he is now getting suspicious of it. So many properties appear to be adjoining this mine that Nature herself ought to be crowded out by this time. Another concern which has invited subscriptions is the West Australian Mine Owners' Exploration Syndicate (Limited). It is formed "for the purpose of facilitating (the italics are ours) the promotion and development of undertakings for mining, milling, smelting, and allied operations in West Australia and elsewhere." We are of opinion that the facilities for these are already too abundant, and that it needs the formation of no syndicate to add to them. The prospectus likewise says:—"The recent discovery of gold in large quantities in West Australia has rendered it necessary for the local mine-owners to seek the assistance of English capital." It needs no new syndicate or individual to tell us this. What we are afraid of is that without any further assistance these mineowners will have ample English capital to develop their properties, in some cases too much. "The Agency will keep the syndicate informed

by weekly reports of the progress made by the various mining companies in West Australia." *The Mining Journal* does all that is necessary in this direction.

NOTWITHSTANDING that Western Australia is at the present moment absorbing universal attention, nevertheless, British Guiana is attracting slowly, but surely, more and more notice as a gold-producing country. According to the report of the Council of the Institute of Mines and Forests for the year 1893-94, the yield during the twelve months ended June 30, 1894, was 137,822 ounces, as against 138,279 ounces for the corresponding period. This small decrease is confined to the North-West district, which, taking the Barima and Barama together, shows a falling off of 1487 ounces. On the other hand, the rivers of the Essequibo basin have, with the exception of the Mazaruni, shown a marked improvement. The small diminution in production, as shown in the last week's returns, is not due to exhaustion, as is shown by the steady improvement of the Potaro, Essequibo, and Cuyuni districts, but is probably the result of the somewhat large investments made in quartz mining companies in 1893. Of the total number of labourers employed, 1109 have been engaged in the development of the quartz reefs.

In his report on the industry, Mr. E. P. Wood, the Commissioner of Mines, draws attention to the fact that there has been little improvement since his last report. He considers that though the revenue has slightly increased it has not done so to the extent that it would have done in any other country than British Guiana. On the other hand, he confirms the statements of the various mining experts who say that the quartz is phenomenally rich. In fact, he states, "richer quartz could scarcely be wished for, and, by this, certain companies ought to have had ten or fifteen thousand tons at grass." After predicting that the Potaro will some day be a large mining centre, Mr. Wood gives it as his conviction that it is only a question of a few years when the revenue from the gold and diamond industry will eclipse all others, and the sooner Government help is given the better it will be for the colony. Commenting upon this the *Demerara Daily Chronicle* says: "Mr. Wood is, of course, entitled to that opinion if he holds it, but we would venture to remind him that the present state of the industry does not afford much hope that his prophecy will soon be verified."

SPEAKING upon the prospects of the migration of white men to British Guiana, the same paper adds these significant statements: "Is it ever likely that white men will come to the colony in thousands for the purpose of prosecuting the gold industry? We do not think it is. The plain fact of the matter is this: that the climate of the interior is unfit for Europeans generally. We need not range beyond the report before us for proof. Mr. Wood went up to the North-West district to see into some dispute cases both on the Barima and the Barama. He had hardly returned from Arakaka when he felt unwell, and on medical advice he had to return to Georgetown, and proceed to Barbados to recuperate his health. Mr. John Orr Love, the Government officer at Baraimani, went up the Barama River to decide some disputes. Before he could do so he was attacked by dysentery, and returning to the Morawhanna Hospital, he died there. The report states that the unfortunate gentleman is buried next to the late Commissioner, Mr. Kenrick. Mr. Sweet, who was appointed in England to the post of Inspector of Mines, arrived in the colony in March last year. In May he sent in his resignation. Mr. Harrison, of the Survey Department, was temporarily appointed, but he was afterwards taken ill, and he had to go to England on sick leave. Mr. Oldfield, the Government officer at Bartica, had also to leave for England on sick leave, and he has now left the service. Surely no stronger evidence than this is needed to justify those conclusions which have been formed as to the insalubrious effects of life in the interior upon Englishmen." Unfortunately, this is the most serious obstacle to the advancement of the gold mining industry in the colony.

LEAVING out of sight all the political considerations of Lord Rosebery's speech except the bare announcement of an appeal to the country upon a proposed constitutional change more sweeping than Mr. Gladstone's Irish policy, there is sufficient cogitative matter for commercial men. It means another period of unrest and trade stagnation. Men who simply desire the prosperity of their businesses were in hopes that long ere now the last matter would have been finally disposed of one way or the other. But we have now told that the settlement is no settlement at all, and that the whole question has to be refoisted with another and greater problem before it. It is a little irritating just as trade is reviving to something like prosperous activity for the whole dreary monotony of business depression to commence again. To the over-sensitive mind there is no great bar to conjuring up a long vista of similar prostrations for the future in the absence of the timely interposition of some cataclysm.

ABSOLUTELY the impending crisis may appear to brand England as a political unfortunate; but, with eyes directed towards other quarters of the globe, she may relatively be found to be unmistakeably blessed. Affairs all round appear to have been for some time brewing trouble. The assassination of the French President, the Chino-Japanese war, the momentous illness and death of the Tzar—whereby the national destiny of all the Russias seem trembling in the balances—these were matters sufficiently crucial to occupy attention for a few months without the addition of a ministerial crisis in Germany and a political storm in Norway. Relatively, then, England may be said to be enjoying its calm, for, in comparison with the other convulsions of the globe, our own national shakings may certainly appear insignificant. Our own affairs have, indeed, during the past vacation entirely been thrown into

the shade by the course of events in many lands, and if our trade is to suffer from the disquietening effects of a prolonged political scuffle, there will be, at least for us, the satisfaction—if, indeed, a satisfaction it will be—of knowing that other nations have been worse off.

THE tin-plate strike in America continues, and to shareholders in tin mining companies the position is full of interest. Eight thousand men are affected by the dispute, and all the block plate works in America are idle. There are now over 60 tin-plate factories in the country, besides others building, and of this total 25 are in Pennsylvania, eight in New York, five in Illinois, six in Ohio, three in Indiana, three in New Jersey, three in Maryland, and others in Michigan and Missouri. The wages reduction sought to be enforced by the American masters in consequence of the reduction in the tariff varies from 15 to 25 per cent., according to the class of labour, the highest-priced operatives being reduced in the largest proportion. In the Western States wages, it is suggestive, are higher than in the Pennsylvania centre, a circumstance to be accounted for by the more skilled character of the labour at the Western mills. In both districts, however, the reduction is to be in the same proportion. An important statement has been made on behalf of the manufacturers of the proportion of the reductions in wages which they seek to enforce to the drop in the tariff. From this it appears that the entire case which the manufacturer would gain in cost of producing a ton of tin-plates by the new wages' scale does not amount to more than \$4 per ton, whereas the reduction in tariff is close on \$22½. Thus the workmen are only asked to bear about 16 per cent. of the tariff fall.

It is remarkable how the tin-plate makers in America are boasting their success in having overcome the labour difficulties which attached to the establishment of the tin-plate trade across the Atlantic. They declare that the necessity for the employment of skilled workmen, such as only Wales could supply, in founding the business, has been made a good deal too much of. The block plate makers in the Pittsburgh district state that they have succeeded in training very ordinary and cheap labour to the work with complete success—so much so, indeed, that it is not even necessary to employ Unionist or Association operatives. The Men's Association, which has its chief strongholds among the operatives in the West, are stoutly canvassing this declaration of the employers, but the fact remains that the Pennsylvania mills are to-day turning out as good black plates as any native product to be found in America. Our United States' friends have not, tin mining readers may like to learn, been successful in starting all the tin-plate works they had projected. We hear of some firms who have already gone into bankruptcy, and had either to close or reform their constituting companies. Other works have not even been built, although the buildings and machinery were ordered, owing to financial difficulties. It, therefore, seems clear that the Americans are having not altogether an easy time in the establishment of their new industry, and some of them evidently find money scarcer than they had imagined.

FROM all accounts it would seem that amongst the great Australian manufacturing industries of the future, that of iron may likely occupy a foremost place, the mineral being distributed over many parts of the Continent. In New South Wales, however, it is more extensively diffused probably than in any other individual colony. Here it is found principally in the form of magnetite, brown hematite or goethite, limonite, and bog iron. According to the Government Statistician of New South Wales, the result of a number of analyses made from magnetic deposits at Brown's Creek, in the county of Bathurst, and at Wallerawang, where veins were opened out a few years ago, shows that the samples of ore yielded from 40.89 to 56.85 per cent. of metallic iron. At Wallerawang, a variety of garnet, containing a large percentage of metal, occurs in conjunction with the ores in the veins, which is described as "extremely well adapted for reduction in the blast furnace." Brown hematite, or goethite, occurs in very extensive deposits in the Blue Mountain Ranges, the principal centres at present known being situated at Mittagong, Picton, and Berrima, in the southern districts; in the Lithgow Valley and at Wallerawang, in the western district; and in the vicinity of Port Stephens on the northern coast. The result of a number of analyses of this kind of ore denotes that it is very rich in metallic iron, containing a percentage of 42.69 to 64.48 per cent., and, in the majority of cases, over 55 per cent. of metal. A sample of hematite from the Maitland district contained 60.83 per cent. of metallic iron. A sample of brown hematite from Mount Pleasant, near Wollongong, analysed during 1891, gave 54.28 per cent. of iron.

THE average value per annum of the iron and iron manufactures imported into the seven colonies of Australasia during the period 1888-1891 was £7,169,119. In a report by the late Mr. C. S. Wilkinson, Government Geologist, it was stated that "the iron deposits in the districts of Mittagong, Wallerawang, and Rylstone contained in sight 12,944,000 tons of ore, estimated to yield 5,853,000 tons of metallic iron. These districts are most favourably situated for the establishment of smelting works. Of late, public attention in England has been drawn to the possibility of manufacturing iron within the colony, and a mining expert was sent out from that country to inspect the iron, lime, and coal deposits, and to report upon the probable cost of establishing the industry in the colony; so far the visit has been without result." When the mineral resources of New South Wales become better known, it is not improbable that European ironmasters may find it advisable to establish branch works on a large scale in the colony. The principal works for the manufacture of iron from the ore are situated at Eskbank, near Lithgow, where red siliceous ore, averaging 22 per cent., and brown hematite, yielding 50 per cent. metallic iron, have been successfully treated.

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

An active week.—South Africans buoyant.—West Australians firm.—Jump in Jagers.—A favourable finish.

A FAIRLY active week closes to-day with every hopeful sign for the future. The favourable effects of the carry-over were plainly apparent in all sections of the market at the reopening on Monday. In Kaffir shares the operations were conducted upon an extended scale, the movements, however, not being uniformly improvements. A disposition to realise profits tended certainly to check the buoyant tone undoubtedly characterising the shares. Land shares were actively dealt in, and all the chief members of the group considerably improved. Diamonds were rather quieter, but the changes were in favourable directions, and both De Beers and Jagers recorded small rises. The same firmness in even a higher degree was manifested by the West Australian section. With two or three exceptions the whole set moved forward. Other sections of the Miscellaneous Market were active; in fact, buoyancy and strength were everywhere apparent. Business came with a rush on Tuesday. In the South African shares large blocks of orders were received, and prices were accordingly hardened. One or two set backs occurred to give the buoyant tone prevailing a contrast, but these were uniformly due to profit-snatching, such as is invariably required by an unusually firm state of markets. Diamonds were active, and both the shares rose considerably. Lands, on the other hand, were rather off colour. West Australian shares and the other miscellaneous descriptions were lively. Wednesday brought an even better state of affairs into the Mining Market. Business was transacted in an unusually large volume. Among South African shares there was a state of quite unusual activity, while, for the most part, West Australians were strong, though in a lesser degree.

British Mines.

There has been a little more life apparent in the Cornish market this week, and at times there have been orders which could not be executed at current prices, for, as a rule, holders are not inclined to part with their shares at the low rates now ruling. Should it take an upward move it would be very difficult to secure any number of shares in the progressive mines at anything approaching the present quoted prices. Carn Brea, Tincroft, and Killifreth have been enquired for, the latter upon the declaration of 1s. 6d. dividend.—Risen: Killifreth 1s. 6d. (allowing for dividend).—Fallen: Dolcoath, £2 10s.; East Pool, 10s.; South Condurow, 2s. 6d.; Tincroft, 5s.; Wheal Agar, 2s. 6d.; and Wheal Grenville, 20s.

South African Shares.

Firmness and activity prevailed on Monday in the South African market. Rises were the rule in the department, and there were only one or two exceptions. Rand Mines and East Rand went higher, the former at 16½ and the latter 24s. 3d. Gold Fields Deep were enquired for and closed at 2½. Roodepoort Deep were dealt in at over 1½. Goldenhuis Deep kept firm over 5½, and Booyens hard at ½; but Champ d'Or Deep were 6d. lower. Simmer and Jack closed ½ better at 8½. There were similar rises in Ferreira, Jubilee, and City and Suburban, carrying the prices respectively to 10½, 6½, and 15½. Crowns rose ½ to 8½. Langlaagte hardened to over 3½, and Langlaagte Royal to 3½. There were advances of ¼ in Rietfontein, Stanhope, Van Ryn, and Sheba, and Worcesters were ½ better. On the other hand, Jumpers were easier, a fall of ½ depressing the price to 5½, and there were also relapses in Henry Nourse, Salisbury, Goldenhuis Estate, Wolhuter, and Champ d'Or. Land shares were characterised by considerable firmness. Chartered were actively dealt in, and closed at 37s. 3d. Exploring and Klerksdorp also were on the upward movement. In the Diamond section De Beers and Jagers shared to some extent in the better tone, and registered small advances. Business throughout Tuesday was of fair volume. Movements were many in number, and in cases where retardations occurred, they were due in main to profit snatching, and so were indirect evidence of the buoyant tone prevailing. Rand Mines, however, were easier, and relapsed to 16½; Simmers went back ¼ to 8½. Gold Fields Deep were ¼ lower at 2½. Villages receded to 4½, East Rand to 23s. 9d., Champ d'Or Deep to £1, and Goldenhuis Deep to 5½. Among the other re-actions were Goldenhuis Estate, Glencairn, Jubilee, Langlaagte Royal, Rietfontein, Buffelsdoorn and Sutherland. Crowns rose ½ to 9½, Cities ¼ to 16½, Ferreira ¼ to 11, Knights ¼ to over 1½. Advances of about ¼ occurred in Chimes, Aurora, Meyer and Charlton, Princess, Stanhope, and Transvaal Gold. Primroses were harder by ¼ at 4½. In the Land department Chartered reacted 6d. to 37s., where they remained all day, while Becha, too, were rather off colour. Jagers jumped up ¼ to 15½, while De Beers gained ¼ to 17½. On Wednesday things were active in the South African market, the principal feature being the rises in New Rietfontein and New Primrose, the former gaining ½ and the latter ¼ on the day. Rises occurred in Crown Reef at 9½, in Goldenhuis Estate at 5½, in Langlaagte Estate at 3 27-32, and in Simmer and Jack at 8½, most of these being ½ higher on the day. Robinson, Modderfontein, Heriot, and Worcester all sympathised with the buoyant tone, but Jumpers continued off colour at 5½—a fall of ¼. Buffelsdoorn, Langlaagte Royal, Ferreira, Van Ryn, and Transvaal Gold showed declines of ¼. In Diamonds there was an excited bidding for Jagers, which carried the shares to 16½. De Beers, on the other hand, lost ¼. Lands were easier, Chartered falling to 36s. 9d.

There has been an uncertainty of tone dominant in the South African market during to-day. Primroses have been made the subject of much speculation, but at the finish they are a trifle off. In the Land section, Chartered are quoted at 37s., and Becha, at 24s. In the Diamond market Jagers have still been very buoyant, while De Beers have shown little movement. Amid all the vacillations of the market, however, there has been a firm under-current.

Risen: African Gold Recovery, 2s. 6d.; Aurora, 1s.; Balkis Land, 6d.; Boons, 4s.; Buffelsdoorn, 1s.; Chartered, 6d.; City and Suburban, 10s.; Crown, 17s. 6d.; De Beers, 2s. 6d.; Exploring, 2s. 6d.; Ferreira, 17s. 6d.; Gordon, 6d.; Glencairn, 1s.; Gold Fields Deep, 5s.; Grahamstown, 1s.; Heriot, 5s.; Joe's Reef, 6d.; Johannesburg Estate, 2s.; Jubilee, 7s. 6d.; Klerksdorp, 3d.; May, 1s. 3d.; New Chimes, 1s. 3d.; New Crossus, 2s. 9d.; New Jagers, 22s.; New Primrose, 7s. 6d.; Nyassa, 2s. 6d.; Princess, 1s. 3d.; Randfontein, 1s. 6d.; Rand Mines, 5s.; Rietfontein, 12s. 6d.; Robinson, 2s. 6d.; Spes Bona, 1s.; Stanhope, 1s. 3d.; Transvaal Estate, 6d.; Transvaal Exploration, 2s. 6d.; Knights, 6d.; Worcester, 5s.; Zambesia, 2s. 6d.—Fallen: Becha, 1s.; Black B, 6d.; Champ d'Or Deep, 2s.; East Rand, 6d.; Exploration, 2s. 6d.; Goldenhuis Main Reef,

6d.; Harmony, 2s.; Henry Nourse, 2s. 6d.; Jumpers, 7s. 6d.; Langlaagte Royal, 2s. 6d.; Lisbon, 31.; Nigel, 1s. 3d.; Sheba, 6d.; Van Ryn, 1s. 3d.; Wemmer, 2s. 6d.

Miscellaneous Shares.

West Australian and Miscellaneous shares were, with very few exceptions, the better in tone at the opening on Monday. Gold Fields improved to 3½, White Feathers to 2, Hampton Lands to 2½, Plains to ½ prem., Explorations to 2, and Bayleys to 20s. 9d. Abbotts are firm at ½ premium. West Australian Mining were better disposed, and hardened to 10s. 6d. Great Boulders and Explorations were the exceptions to the prevailing improvement, and were to some extent depressed. De Lamar advanced 9d. to 23s. 9d., and Champion Reef and Ooregum Preference were each ¼ better, but Guston fell ¼ to 16s. 3d. Rio Tinto gained ¼ to 15½. Considerable activity prevailed among West Australian descriptions on Tuesday. Some weakness was displayed by Great Boulder and Hampton Plains, while West Australian Gold Fields lost the turn of the market. West Australian Mining were easier at 10s. A rise of 2s. occurred in Broken Hill Proprietary at 48s., and Victory again hardened to 8s. St. John del Rey lost 6d., to 27s. 6d.; but De Lamar, Montana, and Don Pedro all showed a small improvement, and Macate were a little harder at 3s. 1½d. bid. Rio Tinto closed at 15½, a rise of ½. West Australians generally were rather dull on Wednesday, the exceptions being Gold Fields, Hampton Plains and Lands, Mining and West Mallina. Elsewhere in the market Victory lost 1s. to 7s., Broken Hill Proprietary fell 6d. to 47s. 6d., and Day Dawn P.C. were also 6d. easier. De Lamar relapsed 6d. to 24s., and both Guston and Montana fell ¼. Bidding for Mysore Gold Fields led to a decline of 1s. to 18s. 6d., but Kapanga were in demand at 4s. 6d., a rise of 6d. Copper shares were rather easier, Rio Tinto leading with a drop to 15, while Copiapo and Cape Copper followed with losses of ¼.

Risen: Bonnie Dundee, 1s.; Brilliant (allowing bonus), 1s. 9d.; Brilliant Block, 1s. 3d.; Brilliant St. George (allowing dividend), 2s. 6d.; Champion Reef, 3s. 9d.; Cumberland, 6d.; Day Dawn P.C. (paid 6d.), 9d.; De Lamar, 1s. 6d.; Elkhorn, 6d.; Idaho, 3d.; Kapanga, 9d.; Kempinkote, 3d.; Macate, 3d.; Mill's Day Dawn, 1s. 3d.; New Queen, 3d.; Poorman, 3d.; Ripanji, 5s.; Sierra Buttes, 1s.; South East Mysore, 3d.; Victory, 1s.; Waihi, 2s. 6d.—Fallen: Australasian, 3d.; British Broken Hill, 6d.; Broken Hill Proprietary, 2s. 6d.; Colombian Hydraulic, 6d.; Frontino, 1s.; Glenrock, 3d.; Golden Feather, 2s. 6d.; Golden Gate, 6d.; Golden Leaf, 3d.; Kangarilla, 6d.; Mason, 2s. 6d.; Montana, 6d.; Mysore, 7s. 6d.; Mysore Reef, 6d.; Namaqua, 1s. 3d.; New Guston, 2s. 6d.; Nine Reefs (9s. 6d. paid) 3d.; Nine Reefs (fully paid), 3d.; Nundydroog, 1s. 3d.; Orita, 3d.; Rio Tinto, 6s. 3d.; St. John del Rey, 6d.; Tharsis, 5s.

West Australian shares have closed fairly steady this evening, though the market is not at its best. Indians have been rather flat, in correspondence with other parts of the Miscellaneous Market, which, as a whole, is not so active to-day as it has been.—Risen: Golconda, 1s. 3d.; Hampton Lands, 1s. 3d.; Kinsella, 1s. 3d.; White Feather, 1s. 3d.—Fallen: Austin, 1s. 3d.; Bayleys, 6d.; Great Boulder, 1s. 3d.; London and West Australia, 2s. 6d.; West Australian Gold, 1s. 3d.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow:—

CONSOLS, Monday, November 5.

STOCKS AND SHARES.

Continuation Days.	Ticket Days.	Pay Days.
Monday, Nov. 12	Tuesday, Nov. 13	Wednesday, Nov. 14
Tuesday, Nov. 27	Wednesday, Nov. 28	Thursday, Nov. 29

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

LADDIN'S LAMP.—The following telegram has been received from the mines:—"During the last three weeks we have crushed 300 tons of ore, yielding 1000 ounces of gold. The stopes still hold good on the 500 feet level, and our No. 2 winze is now 60 feet below this level."

AUSTIN GOLD.—Cabling on October 27 the local board reports everything most satisfactory, their opinion confirmed by best experts, and cabling on the 1st inst. they say:—"Struck reef south-western boundary (at) 60 feet; appears large body stone, water coming strong. Will test reef as soon as water (is got) under."

BRILLIANT BLOCK.—The following cablegram has been received from Charters Towers:—"Have crushed during the fortnight 1213 tons of quartz for 1070 ounces of gold. The profit on the run is £1800. Have declared a dividend of 6d. per share for the month, payable on the 7th instant." The approximate value of this return is £3700.

BRILLIANT GOLD.—The following cablegram has been received from Charters Towers:—"Bonus 3d. per share, payable on November 1 with last dividend. Unissued shares allotted *pro rata*."

BRILLIANT AND ST. GEORGE.—Messrs. Burkitt, Munro and Co., 16, Cornhill, have received a corrected cablegram advising that Brilliant and St. George United crushing is 540 tons for 2492 ounces, and that a dividend has been declared of 6d. per share, payable November 2.

BROKEN HILL PROPRIETARY.—A special cablegram dated October 31, from the *Glasgow Herald's* Adelaide correspondent, states:—"A temporary decline in the return from the Broken Hill Proprietary Mine is probable. In order to open up the property it is seen that it will be necessary to face a good deal of deadwork. After that is accomplished the property will be very much improved."

BRITISH SOUTH AFRICA COMPANY.—"Cape Town, October 27, 1894.—Mr. Hammond has reported to C. J. Rhodes that experienced man has been engaged for Ayrshire; also, that Inez, sampled 100 feet along reef, gave 27 dwts. per ton for a width of 6 feet 6 inches. Alice gives in a shoot of 100 feet long assays of 29 dwts. on a width of 2 feet."

DARCY ESTATES.—Report dated September 21:—"Main shaft sunk during week 10 feet; present depth, 105 feet, no change. Prospecting shaft on Portion 3 sunk 15 feet; present depth, 30 feet; several small veins cut; samples assay 2 ounces per ton."

DAY DAWN P.C.—The directors have sold through Messrs. Johnson, Matthey and Co., the gold ex *s.a. India*, which realised £2538 0s. 8d.

DON PEDRO.—The following telegram, dated Marianna, October 26, has been received:—"Will remit in a few days 3000 oitavas, equal to £1275."

EL CALLAO.—Messrs. Baring Brothers and Co. (Limited) have received the following telegram from El Callao Mining Company:—"201-225 ounces of gold produced by El Callao Mine for past month; and 2126-2160 ounces by the Colombia Mine."

ELKHORN.—Bullion produced in the mill for the week ended October 27, 8900 ounces."

EMPRESS COOLGARDIE GOLD.—The company has received the following cablegram from Mr. F. Lane, dated Adelaide, 1st November:—"Arrived here safely yesterday Empress machinery. Everything is now ready."

FRANK JOHNSON AND CO.—Crushing from Lion Reef produced 3 ounces per ton; assay of tailings good.

GOLDEN FEATHER.—The following has been received by cable from Colonel Frank McLaughlin, the company's general manager at Oroville:—"Delayed by heavy storm, but now I am in a position whereby three weeks' labour preparing mine for winter guarantees sluicing in the richest portion of the claim, directly after the river turn next season. To devote remaining time to mining would be a fatal mistake." One of the directors, who, with the secretary, is now at the mine, cables as follows:—"Having heard and seen all, consider position justified, and that Col. McLaughlin has done his best. With elevator in present position and dams finished, consider that success in 1895 must follow. To ensure a complete success I advise to shut down when it can safely be done. Reconstruction is inevitable, then no further cause for anxiety. Splendid outlook for next season."

GRAVEL GOLD MINES OF COLOMBIA.—The directors have received the following cablegram of the result of run No. 9:—"We have cleaned up after a run of 45 days, during which time we have washed 720 hours. The gross returns are £550; the net profit is £250. We have been very short of water during this run."

KAPANGA.—The directors have received the following telegram from the manager, viz.:—"The tributers working in the Coromandel section on the new reef are getting rich ore. The richness of this run of gold has surpassed our expectations. There is every reason to believe that we are on the top of rich chutes of ore."

MILL'S DAY DAWN UNITED.—The directors have received the following telegram from Charters Towers:—"Have crushed during the month 3958 tons of quartz for a yield of 5243 ounces of gold. The approximate value of this return is £18,000, and the declaration of the usual monthly dividend payable on or about November 26 next will be announced in a subsequent cablegram."

MOUNT LEYSHON.—The Mount Leyshon (Limited) have received the following cablegram, dated 29th inst., from their manager at Charters Towers:—"Clean up 900 tons, crushed 198 ounces gold; 40 stamps mill ran 8 days; profit, £62."

MOUNT MORGAN.—The directors have received the following telegram from the head office, Rockhampton:—"We pay £25,000 on November 1, being dividend of 6d. per share (free of dividend tax) for the month of October."

NEW CHIMES.—Return for September. Stamps ran for 27½ days, crushing 3885 tons of ore, yielding 2066 3-20 ounces of gold, and about 40 tons concentrates, assaying 5 ounces to the ton; 2850 tons tailings yielded 445 1-10 ounces of gold.

NEW RIETfontein.—"Have struck very rich ore at No. 6 level in No. 2 shaft."

ORION.—Details of working for September:—Tons milled, 4967; stamps working, 40; number of days mill ran, 28½; yield from plates, 1280 50 ounces of gold; tailings treated by cyanide, 2538 tons; yield of bullion from cyanide works, 1511 05 ounces; net profit for month, £3122 8s. 7d. Dividend declared 10 per cent.

No. 1 NORTH GLANMIRE.—Mr. Samuel James, of 3, Copthall Chambers, E.C., has received the following cablegram, dated Gympie, 30th inst.:—"1 North Glanmire crushed 634 tons, yielding 966 ounces of gold. Dividend declared, 2s. 6d. per share."

NEW QUEEN.—The directors have received the following cablegram, dated Charters Towers, October 27, giving result of crushing for past fortnight:—"No. 1 formation 245 tons, yielding 335 ounces gold. About to commence crushing No. 4 formation 30th day of October. Have shipped per *s.s. Merkara* 784 ounces."

SHEBA.—The directors have received the following cablegram from the general manager for the month of October:—"3950 tons (2000 lbs.) of ore crushed, yield 1781 ounces; 6800 tons (2000 lbs.) tailings treated, yield 2175 ounces; 80 tons (2000 lbs.) concentrates (assay value) 715 ounces; total 4671 ounces."

SPITZKOP FARM.—The transfer of the above company will be closed on Monday, Tuesday, and Wednesday in next week.

TOLIMA.—The following cablegram has been received from the mines:—"Estimated profit for October over £3000." In the above return silver is valued at 29½d. per ounce.

TRANSVAAL GOLD EXPLORATION AND LAND.—The following has been received from the general manager:—"Trial run made; electric plant fairly satisfactory. Expect new battery will commence to work Monday. I will telegraph."

TWIN LAKES PLACERS.—The managing director reports that during the month of October 60,000 cubic yards of gravel were washed, and the bullion was produced of the estimated value of \$5000.

VICTORIA AND QUEEN.—Cablegram from Charters Towers:—"Call has been made of 6d. per share, payable 16th November, 1894."

VICTORY (Charters Towers).—The London Office has received the following cablegram from the head office in Sydney dated November 1:—"Crushing (for the fortnight) from No. 2 shaft 65 tons for 43 ounces. Clarke's Brilliant and Worcester shaft 120 tons for 73 ounces. Total 185 tons for 115 ounces of gold."

WAIHI GOLD.—Bullion return for 28 days ending 20th inst., £7800 from 2100 tons.

WORCESTER EXPLORATION.—Details of working for September:—Tons milled, 2021; stamps working, 20; number of days mill ran, 29; yield of gold, 2219 ounces 5 dwts.; concentrates, 418 ounces; total, 2637 ounces 5 dwts.

THE Warden of the Murchison district has completed a 500 mile tour of inspection. He reports:—"New finds are being made in almost all directions, and everything points to the fact that this immense district is not yet by any means fully prospected. Though nothing very sensational is found as a rule, mining properties in the Murchison are of a substantial and permanent character, yielding good averages of gold."

One hundred and nineteen ounces of gold were brought down by the Demerara Ferry steamer on the 6th ult. for the Kaniapoo Gold Mining Company. This, the *Demerara Daily Chronicle* understands, is the result of a general clean up after a fortnight's working. The amount, though disappointing, is a decided improvement on the result of the first crushing which was carried over a period of 18 days. There is a decided improvement in the fineness of the gold, the first return being something less than 84 in 100 in point of standard as compared with 92 for the present return.

THE EDITOR'S LETTER BOX.

It is the policy of this journal to accept no responsibility for the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though they need not necessarily be published.

WHEAL GRENVILLE V. SOUTH CONDURROW.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—As the diallers for Wheal Grenville, perhaps you will kindly permit us, now that the case is concluded, to say a few words in justice to our clients and ourselves.

In the first place, we understand that considerable surprise has been expressed in mining circles that our Mr. James Henderson should have been reported to have said in Court that no working plan of a mine was accurate. What he did say, really, was that no working plan was reliable—it might be accurate and it might not; the element of uncertainty was so great that in all important matters special diallings were necessary. A few of the reasons for this uncertainty may not be without interest to your readers.

(1) Variation of the compass.—The needle is, as is well known, subject to an annual variation. In keeping up a working plan from year to year this variation has, of course, to be allowed for; but only approximate allowance can be made, and such will ever be the case until magnetic records are taken in this county similar to those at Greenwich Observatory. Again, the needle is not only subject to an annual variation from the true north, but to diurnal fluctuations and to "magnetic storms," which cause considerable disturbance. Hence the older a mine plan is, the more likely it is, owing to the unknown variations of the needle during the diallers' work, to be unreliable. Local attraction in some mines is very great. At the Land's End, for instance, the general deviation of the needle for this year (1894) is 19½° west of true north, while underground at Botallack Mine the variation from the true meridian is, in places, as much as 50 to 60°. Hence, while it is imperative, by reason of the small size and tortuous construction of the mine shafts, for every dialler of Cornish mines to depend upon the compass needle alone, he is ever apprehensive lest at one time or another, in the life of a working plan, magnetic storms, temporary local attractions, &c., may have occurred and thrown his work, so to speak, out of gear.

(2) Contraction and expansion of the paper on which the plan is drawn is a source of error which cannot be disregarded, seeing that the work has to be laid down at all times of the year.

(3) In keeping up the plan of a mine for any long period recourse must naturally be had to different assistants, each, perhaps, with different instruments. Perfect as the instruments may be, no two are exactly alike, or produce precisely the same results; while it is the same with the men.

For these reasons, when an important piece of work is in hand, the mine plan cannot be relied upon, and special diallings are necessary, and such special diallings, wherever possible, should be carried out at one and the same time by one and the same man, with one and the same instrument, and laid down on paper at one and the same time also.

It has gone forth to the public that in this important survey we failed to make use of the latest instruments and methods afforded by science. A large transit theodolite was produced in Court, and the system of triangulation and of plotting by co-ordinates dwelt upon with much force and to our supposed discomfiture. As far as the theodolite is concerned we have, and have had for years, one of the same character in our office, while our Mr. James Henderson, as formerly a Government surveyor in Australia, is equally at home with the use of the theodolite, and the system of triangulation as he is with the use of a two-foot rule. It may be asked why we did not use our theodolite and plot by co-ordinates in the present case. We used the instruments which, from our long experience, we felt would give the results required.

A blow with the flat of the hand will kill a fly, quite as surely as a stroke from a sledge hammer, and it is a fact that the fine transit theodolite produced in Court was not taken underground at all. It was used by our opponents at the surface only, where it confirmed to a nicety the accuracy of our surface work done with the "Rapid" traverser with regard to the relative position of the shafts and boundary. We may ask, consequently, where does its vaunted superiority in such work come in?

In dialling underground, however, the surveyors on both sides employed the ordinary miner's "rack" dial, the use of the "Rapid" traverser being reserved by us for the levels only. With regard to the co-ordinate system of plotting, it is one we are perfectly familiar with, and adopt in almost every case of extensive surveys where we are unable to obtain what is technically known as a "closed traverse." In the present instance, knowing the importance of the work, we took very considerable pains and dialled a long distance to obtain a closed traverse. The traverse we made "tied in" to our entire satisfaction, thus proving the accuracy of the work, and dispensing with the necessity of checking by co-ordinates.

For our opponents there was no "closed traverse." Their work remains what is technically known as an "open traverse," which is, necessarily, open also to doubt and uncertainty. It has been alleged that the two surveyors for South Condurrow corroborated each other. Such is not, however, the fact, as there is a glaring discrepancy in the plan produced by each, extending to as much as 8 feet, in a part of the underground survey, in close proximity to two of the alleged encroachments. Fortunately for them, this difference is in an easterly and westerly direction. Had the boundary between the two mines been in any other direction than what it is, where would the corroboration have been? An important point might have been made at the trial of the serious discrepancy between the defendants' two plans, which was discovered by us only at almost the last moment, but the matter was permitted to slip, and the impression on the public mind that the defendants' plans corroborated each other was allowed to remain.

No such difference, or anything approaching to it, existed in the Wheal Grenville plans, and we should have been glad if the Vice-Warden had commented, when giving his judgment, on this circumstance. We make these remarks with no invidious feeling towards our professional opponents, for one of whom, as the result of a long acquaintance, we entertain the highest opinion. They have won the day, and we submit to our defeat with the best grace we are capable of. But we feel it a duty to ourselves and to our numerous clients to explain matters which might otherwise appear to the latter quite inconsistent and obscure.—Yours, &c., HENDERSON AND SON, C.E.

Truro, October, 1894.

COOLGARDIE GOLD FIELDS.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—I notice in your issue of October 27 a paragraph stating that Mr. Samuel Gifford, a representative of Messrs. John Taylor and Sons, has reported that he is unable to recommend any of the Coolgardie properties offered to him. You regard it

as at the least "very singular." Perhaps you will allow me to offer you a possible explanation.

Mr. Gifford left Coolgardie (I think) the first week in May. Full work on the field had only been recently resumed there after the three months' exemption granted by the Government during last summer, and Bayley stood alone as the one very rich mine.

I arrived on April 28, and was in Coolgardie till July 14. Personally I was satisfied on the day of arrival that the reefs would live by an inspection of Bayley's down to 240 feet. Every day of my stay everyone worked everywhere energetically, new discoveries were made, and developments proceeded with. At the end of June the Londonderry burst upon the township, amazing even the most sanguine speculator. Later still, after my departure, the Wealth of Nations was discovered; rich stone was struck at Siberia, &c., &c.

I can only repeat that I believe had Mr. Gifford awaited developments, he would have been satisfied. A firm of assayers and metallurgists from Bendigo (Victoria) assured me a few days before I left that there were 3-ounce reefs all round Coolgardie. My own impressions you already have in your interview of October 13.

In the meantime, however, I am very glad to hear that English capital is at last being directed to Victoria. That it is a move thoroughly justified by my own knowledge of the resources of the older Australian gold fields assures me.—I am, yours truly, J. FRANCIS MARKES, F.G.S., &c.

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.E.

Champ d'Or.

The development being pushed ahead, and the ore opened up continues in richness, the present rate of output will be easily maintained. The shares are good buying at present price.

Champ d'Or Deep Levels.

When the mill starts in November the ore put through the first month will average 14 dwts., and the next month I expect it will be 20 dwts. These shares should also be bought at present price.

Princess.

The property consists of 5000 feet of outcrop and 3000 feet of dip ground, and under the present efficient management the future prospects of the company are distinctly good. There are two reefs in the mine, with an average dip of 40°. The first may be called the south reef, and possesses all the characteristics of the leader found on the Darban Roopeport. It is 6 inches wide, highly payable, with improvement both as to width and quality as depth is reached. The second reef, which varies from 3 to 6 feet in width, and now being prospected with very encouraging results, and with a large mill and cyanide plant, is undoubtedly a payable one. It has been clearly shown lately that the rich shoot of gold which had been opened up on the United Main Reef and the Darban Roopeport, and from which such highly payable returns have been made, is also in the Princess. It dips west into the property. This accounts in a large measure for the improved returns which are being made from the lower levels. Twelve months ago prospects were anything but cheery. But now that development is well ahead, and rock sorting is taking place with Mr. Spencer at the head of affairs, returns will undoubtedly augment month by month. The stopes have been worked for a width of 3 feet, of which only 6 inches is payable. Such action resulted in a 4 dwts. show. Now that the 6 inches goes to the mill the gold return is augmented by 250 per cent., and it may confidently be predicted that the lower levels will give quite 12 dwts. Having in view the fact, as before mentioned, that the company owns its own deep levels, the mine may be reckoned to have a life of 30 years, and amalgamation is not required. The new reconstruction scheme will put the company in a strong financial position, with ample funds at its disposal for the erection of the additional machinery required for working so large and promising a concern. Viewing the matter all round, the conclusion is forced on one that dividends at the rate of 30 per cent. per annum are practically assured in the near future, and a market price of 50s. per share imminent. All that is now wanted is adequate machinery, which no doubt shareholders at the coming meeting will be only too willing to supply.

Bonanza.

Active development work is now proceeding on this property under the superintendence of Mr. Spencer, of the Princess, who is consulting engineer. The rich south reef of the Robinson is already proved to be present. This will give (mill and cyanide) 1 ounce returns. It goes without saying that such a return spells prosperity for the Bonanza. A calculation has been made, with every probability of realisation, that before this property is worked out, a return equal to 400 per cent. will be forthcoming.

Glencairns.

The 5 feet reef, at the 4th and 5th levels, in the eastern drives, has during the last few days been panned systematically by the management, with more than satisfactory results. Although the ore is highly pyritic, a high percentage of free gold augurs well for the yield per stamp when crushing commences on this reef.

Benoni Syndicate.

The marked improvements that have lately been shown to have taken place in the eastern portions of these fields have naturally greatly enhanced the value of this syndicate's property. To those who are not clear on this point, it may be as well to state that the chances of securing the western extension of the reefs running through the Chimes, Kleinfontein, Modderfontein, and Van Ryn properties is practically assured. Why this has not been done before is easily accounted for, the reason being that the surface soil is very heavy, and the country rock somewhat disturbed. However, the reefs are there all the same. As tending to show the value of the property, one has only to remember that the aforementioned companies, viz., the Chimes, Kleinfontein, Modderfontein, and Van Ryn aggregate a monthly profit of £12,000.

Mulder's Farm.

The development work going on along the line of reefs contained in the Orion, Cornucopia, Golden Kopje, and Meyer and Leeb, goes to show clearly that all the rich shoots of gold found on them dip into Mulder's Farm. This property is in the same relative position to the series of reefs as the Rand mines holds to the main reef series, viz., having all the dips of the best mines.

SOME very fine specimens of gold ore have been found on the north fork of the Kettle River, British Columbia.

A WEEK's clean up at the Ontario mine, Utah, was 25,000 ounces of fine silver.

THE gold output for this year at Cripple Creek will probably exceed \$5,000,000, says the Nelson Miner.

A QUANTITY of high grade cube galena has been struck on the High Ore, a fraction situate between, says the New Denver correspondent of the Miner, B. C., the Idaho and the Cumberland.

It is reported that a further important discovery of gold has been made this week near Coolgardie. The rock, which is said to be wonderfully rich, was found some 90 miles north of Coolgardie, on the borders of Lake Carey, and close to Mount Margaret.

CARREL V. CYANIDE.—It is expected that Mr. Justice Romer will deliver judgment in this case in the course of a few days.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, NOVEMBER 2.

Copper.

THE speculative market for G.M.B.'s opened quiet, but in steady tone at £40 15s. s.c., but the moderate quantities offered sufficed to depress values somewhat, three months going from £41 3s. 9d. to £41 1s. 3d., and £40 13s. 9d. being accepted for a turnover for the day was about 375 tons, and that for the following day only 175 tons at unchanged prices. Wednesday's market was distinguished by much more animation, and the presence of several buying orders both for prompt and forward G.M.B.'s, in consequence of which we had a rise of 2s. 6d., £40 16s. 3d. being paid for cash. The quantity which changed hands on Wednesday was about 650 tons. On Thursday, despite the statistics, showing a decrease of 200 tons in the visible supplies, the market was depressed to £40 13s. 9d. s.c. being done. To-day values receded again, the shipments from America advised being rather heavier than had been anticipated. £40 6s. 3d. was taken for s.c., and the market closed quiet, though a trifle firmer at £40 6s. 3d. to £40 7s. 6d., s.c., and £40 12s. 6d. to £40 13s. 9d. three months.

Tin.

opened in rather firmer tendency, and continued to improve, three months changing hands at £67 5s. up to £67s. 12s. 6d., whilst for s.c. £67 to £67 5s. was paid. There was no special feature, a few buying orders accounting for the improvement, which was maintained again on Tuesday, when three months' Straits was done at £67 15s. The turnover for the two days amounted to about 265 tons total. Wednesday's markets developed considerable strength, the satisfactory deliveries wired from Holland probably having something to do with the purchases made here by speculators. The day's transactions totalled about 260 tons, and up to £68 was paid for s.c., whilst this position rose on Thursday to £68 10s., the close that day being, however, weaker at £68 2s. 6d. To-day, on lower advices from America, and statements to the effect that large numbers of men at South Wales tin-plate works are about to be sent off, the market fell heavily, and closes dull at £67 to £67 1s. 3d. s.c., and £67 5s. to £67 6s. 3d. three months. In the Dutch market there has been a steady advance, Billiton having opened at fl. 40½ s.c., and touching successively fl. 40½, fl. 40½, and fl. 41, closing at the highest. Rand closes at fl. 41½, as compared with fl. 41½ last week's final figure.

Pig Iron.

The Glasgow market opened at 42s. 9d. a month in firm tendency, and touched 42s. 9d., whilst s.c. was done in at 42s. 7½. Later the tone fell off, and 42s. 6½ s.c. was done on Monday, and 42s. 6d. on Tuesday. Wednesday's business in s.c. was at 42s. 6½ and 42s. 7d., Thursday's at 42s. 9d. to 42s. 7d., and to-day's at 42s. 6½ d. to 42s. 8d. The market closes firm with buyers at 42s. 8½ s.c., and 42s. 9d. a month, Scotch. For hematites 42s. 7½.. and for Middlesbrough 35s. 8½ d. the closing value. The shipments from Scotland last week were 5178 tons, or 1180 tons less than in the corresponding week of last year.

Lead.

A considerable quantity has been done recently at £9 14s. 3d. for soft foreign. The market closes after business at £9 17s. 6d. firm at £9 17s. 6d. for soft foreign, and £10 for English.

Spelter.

opened dull, and ordinaries were easier at £14 17s. 6d. We close rather firmer at £14 18s. 9d. ordinaries, specials being quoted at £15.

Antimony.

continues steady at £33 to £34.

Quicksilver.

likewise steady, firsts being quoted £6 15s., and seconds £6 9s., to £6 10s.

The following are to-night's (November 2) prices of metals:—

Copper.			
Tough cake and ingot	...	43 5 0	43 10 0
Best selected	...	43 15 0	44 5 0
Sheets and sheathing	...	51 15 0	52 5 0
Flat bottoms	...	54 15 0	56 5 0
Chill bars	...	40 7 6	40 10 0
Good merchantable, spot, & 3 months respectively	...	40 7 6	40 10 0
Copper tubes, seamless	...	...	...
Alloys.			
BRASS: Wire	...	...	...
Tubes (solid drawn)	...	...	...
Sheets	...	...	...
PHOSPHOR BRONZE: Alloys II.	...	...	...
" III. or V	...	...	...
" VII.	...	...	...
" XI.	...	...	...
" Vulcan brand A1	...	...	...
DURUMETAL	...	...	...
BULL'S METAL	...	...	...
Ferrobronze (Vivian's).			
Ingot	...	0 0 5 1/2	...
Ordinary sheets, plates, bolts and bars	...	0 0 6 1/2	...
Screw bolts and nuts	...	0 0 8	...
Pump rods, plain	...	0 0 7	...
finished	...	0 0 10	...
DELTA METAL: No. 4 (per ton)	...	0 0 10 1/2	75 10
Sheets and plates (per lb.)	...	0 0 10 1/2	...
Bars, round, square, flat (per lb.)	...	0 0 9 1/2	...
hexagon (per lb.)	...	0 0 9	...
Tin.			
English, ingots, f.o.b.	...	69 15 0	70 5 0
bars	...	70 15 0	71 5 0
refined	...	71 15 0	72 5 0
Straits, spot and 3 months respectively	...	67 0 0	67 7 1/2
Australian, spot, and three months respectively	...	67 2 0	67 7 1/2
Banco (in Holland)	...	69 15 0	69 17 1/2
TIN PLATES: Charcoal, best quality	...	per box 0 15 0	0 17 1/2
ordinary	...	0 12 0	0 14 1/2
Coke, best quality	...	0 10 0	0 10 1/2
ordinary	...	0 10 0	0 10 1/2
These prices of tinplates are f.o.b. at Swansea; at Liverpool 9d. per doz. more.			
Iron.			
Pig, G.M.B., f.o.b. Clyde, spot	...	...	...
Scotch pig, No. 1 Garthris	...	...	...
Coltness	...	...	...
Clyde	...	...	...
Govan	...	...	...
Bars, Welsh, f.o.b. Wales	...	...	...
Plates	...	...	...
Bars, Staffordshire, at works	...	...	...
Sheets	...	...	...
Plates	...	...	...
Hoops	...	...	...
Ship plates, Middlesbrough	...	...	...
Brake: English spring	...	...	...
cast	...	...	...
Nails at works, according to section	...	3 15 0	4 10 0
Lead.			
Spanish or soft foreign	...	...	...
English pig, common	...	...	...
L.B.	...	...	...
sheet and bar	...	...	...
pipe	...	...	...
red	...	...	...
white	...	...	...
patent shot	...	...	...
Spelter.			
Hispan ordinary brands	...	...	...
special brands	...	...	...
English swans	...	...	...
Sheet zinc	...	18 5 0	18 10 0
Antimony.			
Antimony	...	33 0 0	34 0 0
Quicksilver.			
Flasks, 75 lbs. warrants	...	6 0 0	6 15 0
Ore, c.i.f., U.K. ports	...	...	...
1st quality, 50 per cent. and upwards	...	0 0 10 1/2	0 0 11 1/2
2nd " 47 per cent. to 50 per cent.	...	0 0 9	0 0 10
3rd " 45 " 47 per cent.	...	0 0 8	0 0 9
99-99 1/2 per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)	...	...	...
do do do	...	...	...
Nickel.			
99-99 per cent. guaranteed	...	0 1 4	0 1 1

OUR CITY ARTICLE.

FRIDAY EVENING.

THE MINING MARKET.

An active week.—South Africans buoyant.—West Australians firm.—Jump in Jagers.—A favourable finish.

A FAIRLY active week closes to-day with every hopeful sign for the future. The favourable effects of the carry-over were plainly apparent in all sections of the market at the reopening on Monday. In Kaffir shares the operations were conducted upon an extended scale, the movements, however, not being uniformly improvements. A disposition to realise profits tended certainly to check the buoyant tone undoubtedly characterising the shares. Land shares were actively dealt in, and all the chief members of the group considerably improved. Diamonds were rather quieter, but the changes were in favourable directions, and both De Beers and Jagers recorded small rises. The same firmness in even a higher degree was manifested by the West Australian section. With two or three exceptions the whole set moved forward. Other sections of the Miscellaneous Market were active; in fact, buoyancy and strength were everywhere apparent. Business came with a rush on Tuesday. In the South African shares large blocks of orders were received, and prices were accordingly hardened. One or two set backs occurred to give the buoyant tone prevailing a contrast, but these were uniformly due to profit-snatching, such as is invariably enquired by an unusually firm state of markets. Diamonds were active, and both the shares rose considerably. Lands, on the other hand, were rather off colour. West Australian shares and the other miscellaneous descriptions were lively. Wednesday brought an even better state of affairs into the Mining Market. Business was transacted in an unusually large volume. Among South African shares there was a state of quite unusual activity, while, for the most part, West Australians were strong, though in a lesser degree.

British Mines.

There has been a little more life apparent in the Cornish market this week, and at times there have been orders which could not be executed at current prices, for, as a rule, holders are not inclined to part with their shares at the low rates now ruling. Should tin take an upward move it would be very difficult to secure any number of shares in the progressive mines at anything approaching the present quoted prices. Carn Brea, Tincroft, and Killifreth have been enquired for, the latter upon the declaration of 1s. 6d. dividend.—Risen: Killifreth 1s. 6d. (allowing for dividend).—Fallen: Dolcoath, £2 10s.; East Pool, 10s.; South Condurrow, 2s. 6d.; Tincroft, 5s.; Wheal Agar, 2s. 6d.; and Wheal Grenville, 20s.

South African Shares.

Firmness and activity prevailed on Monday in the South African market. Rises were the rule in the department, and there were only one or two exceptions. Rand Mines and East Rand went higher, the former at 16½ and the latter 24s. 3d. Gold Fields Deep were enquired for and closed at 2½. Roodepoort Deep were dealt in at over 1½. Geldenhuis Deep kept firm over 5½, and Booyens hard at ½; but Champ d'Or Deep were 6d. lower. Simmer and Jack closed ½ better at 8½. There were similar rises in Ferreira, Jubilee, and City and Suburban, carrying the prices respectively to 10½, 6½, and 15½. Crowns rose ¼ to 8½. Langlaagte hardened to over 3½, and Langlaagte Royal to 3½. There were advances of ¼ in Rietfontein, Stanhope, Van Ryn, and Sheba, and Worcesters were ½ better. On the other hand, Jumpers were easier, a fall of ½ depressing the price to 5½, and there were also relapses in Henry Nourse, Salisbury, Geldenhuis Estate, Wolhuter, and Champ d'Or. Land shares were characterised by considerable firmness. Chartered were actively dealt in, and closed at 37s. 3d. Exploring and Klerksdorp also were on the upward movement. In the Diamond section De Beers and Jagers shared to some extent in the better tone, and registered small advances. Business throughout Tuesday was of fair volume. Movements were many in number, and in cases where retardations occurred, they were due in main to profit snatching, and so were indirect evidence of the buoyant tone prevailing. Rand Mines, however, were easier, and relapsed to 16½; Simmers went back ¼ to 8½. Gold Fields Deep were ¼ lower at 2½. Villages receded to 4½, East Rand to 23s. 9d., Champ d'Or Deep to £1, and Geldenhuis Deep to 5½. Among the other re-actions were Geldenhuis Estate, Glencairn, Jubilee, Langlaagte Royal, Rietfontein, Buffelsdoorn and Sutherland. Crowns rose ½ to 9½, Cities ¼ to 16½, Ferreira ¼ to 11, Knights ¼ to over 1½. Advances of about ¼ occurred in Chimes, Aurora, Meyer and Charlton, Princess, Stanhope, and Transvaal Gold. Primroses were harder by ¼ at 4½. In the Land department Chartered reacted 6d. to 37s., where they remained all day, while Bechs, too, were rather off colour. Jagers jumped up ¼ to 15½, while De Beers gained ¼ to 17½. On Wednesday things were active in the South African market, the principal feature being the rises in New Rietfontein and New Primrose, the former gaining ½ and the latter ¼ on the day. Rises occurred in Crown Reef at 9½, in Geldenhuis Estate at 5½, in Langlaagte Estate at 3 27-32, and in Simmer and Jack at 8½, most of these being ½ higher on the day. Robinson, Modderfontein, Heriot, and Worcester all sympathised with the buoyant tone, but Jumpers continued off colour at 5½—a fall of ¼. Buffelsdoorn, Langlaagte Royal, Ferreira, Van Ryn, and Transvaal Gold showed declines of ¼. In Diamonds there was an excited bidding for Jagers, which carried the shares to 16½. De Beers, on the other hand, lost ¼. Lands were easier, Chartered falling to 36s. 9d.

There has been an uncertainty of tone dominant in the South African market during to-day. Primroses have been made the subject of much speculation, but at the finish they are a trifle off. In the Land section, Chartered are quoted at 37s., and Bechs at 24s. In the Diamond market Jagers have still been very buoyant, while De Beers have shown little movement. Amid all the vacillations of the market, however, there has been a firm under-current.

Risen: African Gold Recovery, 2s. 6d.; Aurora, 1s.; Balkis Land, 6d.; Booyens, 4s.; Buffelsdoorn, 1s.; Chartered, 6d.; City and Suburban, 10s.; Crown, 17s. 6d.; De Beers, 2s. 6d.; Exploring, 2s. 6d.; Ferreira, 17s. 6d.; Gordon, 6d.; Glencairn, 1s.; Gold Fields Deep, 5s.; Grahamstown, 1s.; Heriot, 5s.; Joe's Reef, 6d.; Johannesburg Estate, 2s.; Jubilee, 7s. 6d.; Klerksdorp, 3d.; May, 1s. 3d.; New Chimes, 1s. 3d.; New Crosses, 2s. 9d.; New Jagers, 22s.; New Primrose, 7s. 6d.; Nyassa, 2s. 6d.; Princess, 1s. 3d.; Randfontein, 1s. 6d.; Rand Mines, 5s.; Rietfontein, 12s. 6d.; Robinson, 2s. 8d.; Spes Bona, 1s.; Stanhope, 1s. 8d.; Transvaal Estate, 6d.; Transvaal Exploration, 2s. 6d.; Knights, 6s. 6d.; Worcester, 5s.; Zambesia, 2s. 6d.—Fallen: Bechs, 1s.; Block B, 6d.; Champ d'Or Deep, 2s.; East Rand, 6d.; Exploration, 2s. 6d.; Geldenhuis Main Reef,

6d.; Harmony, 2s.; Henry Nourse, 2s. 6d.; Jumpers, 7s. 6d.; Langlaagte Royal, 2s. 6d.; Lisbon, 3s.; Nigel, 1s. 3d.; Sheba, 6d.; Van Ryn, 1s. 3d.; Wemmer, 2s. 6d.

Miscellaneous Shares.

West Australian and Miscellaneous shares were, with very few exceptions, the better in tone at the opening on Monday. Gold Fields improved to 3½, White Feathers to 2, Hampton Lands to 2½, Plains to ½ prem., Explorations to 2, and Bayleys to 20s. 9d. Abbotts are firm at ½ premium. West Australian Mining were better disposed, and hardened to 10s. 6d. Great Boulders and Explorations were the exceptions to the prevailing improvement, and were to some extent depressed. De Lamar advanced 9d. to 23s. 9d., and Champion Reef and Ooregum Preferences were each ¼ better, but Guston fell ¼ to 16s. 3d. Rio Tinto gained ¼ to 15½. Considerable activity prevailed among West Australian descriptions on Tuesday. Some weakness was displayed by Great Boulder and Hampton Plains, while West Australian Gold Fields lost the turn of the market. West Australian Mining were easier at 10s. A rise of 2s. occurred in Broken Hill Proprietary at 43s., and Victory again hardened to 8s. St. John del Rey lost 6d., to 27s. 6d.; but De Lamar, Montana, and Don Pedro all showed a small improvement, and Macate were a little harder at 3s. 1½d. bid. Rio Tinto closed at 15½, a rise of ½. West Australians generally were rather dull on Wednesday, the exceptions being Gold Fields, Hampton Plains and Lands, Mining and West Mallina. Elsewhere in the market Victory lost 1s. to 7s., Broken Hill Proprietary fell 6d. to 47s. 6d., and Day Dawn P.C. were also 6d. easier. De Lamar relapsed 6d. to 24s., and both Guston and Montana fell ¼. Bidding for Mysore Gold Fields led to a decline of 1s. to 18s. 6d., but Kapanga were in demand at 4s. 6d., a rise of 6d. Copper shares were rather easier, Rio Tinto leading with a drop to 15, while Copiapo and Cape Copper followed with losses of ¼.

Risen: Bonnie Dundee, 1s.; Brilliant (allowing bonus), 1s. 9d.; Brilliant Block, 1s. 3d.; Brilliant St. George (allowing dividend), 2s. 6d.; Champion Reef, 3s. 9d.; Cumberland, 6d.; Day Dawn P.C. (paid 6d.), 9d.; De Lamar, 1s. 6d.; Elkhorn, 6d.; Idaho, 3d.; Kapanga, 9d.; Kempinkote, 3d.; Macate, 3d.; Mill's Day Dawn, 1s. 3d.; New Queen, 3d.; Poorman, 3d.; Ripanji, 5s.; Sierra Buttes, 1s.; South East Mysore, 3d.; Victory, 1s.; Waihi, 2s. 6d.—Fallen: Australasian, 3d.; British Broken Hill, 6d.; Broken Hill Proprietary, 2s. 6d.; Colombian Hydraulic, 6d.; Frontino, 1s.; Glenrock, 3d.; Golden Feather, 2s. 6d.; Golden Gate, 6d.; Golden Leaf, 3d.; Kangarilla, 6d.; Mason, 2s. 6d.; Montana, 6d.; Mysore, 7s. 6d.; Mysore Reef, 6d.; Namaqua, 1s. 3d.; New Guston, 2s. 6d.; Nine Reefs (9s. 6d. paid) 3d.; Nine Reefs (fully paid), 3d.; Nundydroog, 1s. 3d.; Orita, 3d.; Rio Tinto, 6s. 3d.; St. John del Rey, 6d.; Tharsis, 5s.

West Australian shares have closed fairly steady this evening, though the market is not at its best. Indians have been rather flat, in correspondence with other parts of the Miscellaneous Market, which, as a whole, is not so active to-day as it has been.—Risen: Golconda, 1s. 3d.; Hampton Lands, 1s. 3d.; Kinsella, 1s. 3d.; White Feather, 1s. 3d.—Fallen: Austin, 1s. 3d.; Bayley's, 6d.; Great Boulder, 1s. 3d.; London and West Australia, 2s. 6d.; West Australian Gold, 1s. 3d.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow:—

CONSOLS, Monday, November 5.

STOCKS AND SHARES.

Continuation Days.	Ticket Days.	Pay Days.
Monday, Nov. 12	Tuesday, Nov. 13	Wednesday, Nov. 14
Tuesday, Nov. 27	Wednesday, Nov. 28	Thursday, Nov. 29

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

LADDIN'S LAMP.—The following telegram has been received from the mines:—"During the last three weeks we have crushed 300 tons of ore, yielding 1000 ounces of gold. The stopes still hold good on the 500 feet level, and our No. 2 winze is now 60 feet below this level."

AUSTIN GOLD.—Cabling on October 27 the local board reports everything most satisfactory, their opinion confirmed by best experts, and cabling on the 1st inst. they say:—"Struck reef south-western boundary (at) 60 feet; appears large body stone, water coming strong. Will test reef as soon as water (is got) under."

BRILLIANT BLOCK.—The following cablegram has been received from Charters Towers:—"Have crushed during the fortnight 1213 tons of quartz for 1070 ounces of gold. The profit on the run is £1800. Have declared a dividend of 6d. per share for the month, payable on the 7th instant." The approximate value of this return is £3700.

BRILLIANT GOLD.—The following cablegram has been received from Charters Towers:—"Bonus 3d. per share, payable on November 1 with last dividend. Unissued shares allotted *pro rata*."

BRILLIANT AND ST. GEORGE.—Messrs. Burkitt, Munro and Co., 16, Cornhill, have received a corrected cablegram advising that Brilliant and St. George United crushing is 540 tons for 2492 ounces, and that a dividend has been declared of 6d. per share, payable November 2.

BROKEN HILL PROPRIETARY.—A special cablegram dated October 31, from the *Glasgow Herald's* Adelaide correspondent, states:—"A temporary decline in the return from the Broken Hill Proprietary Mine is probable. In order to open up the property it is seen that it will be necessary to face a good deal of deadwork. After that is accomplished the property will be very much improved."

BRITISH SOUTH AFRICA COMPANY.—"Cape Town, October 27, 1894.—Mr. Hammond has reported to C.J. Rhodes that experienced man has been engaged for Ayrshire; also, that Inez, sampled 100 feet along reef, gave 27 dwts. per ton for a width of 6 feet 6 inches. Alice gives in a shoot of 100 feet long assays of 29 dwts. on a width of 2 feet."

D'ARCY ESTATES.—Report dated September 21:—"Main shaft sunk during week 10 feet; present depth, 105 feet, no change. Prospecting shaft on Portion 3 sunk 15 feet; present depth, 30 feet; several small veins cut; samples assay 2 ounces per ton."

DAY DAWN P.C.—The directors have sold through Messrs. Johnson, Matthay and Co., the gold ex a.s. *India*, which realised £2538 0s. 8d.

DON PEDRO.—The following telegram, dated Marianna, October 26, has been received:—"Will remit in a few days 3000 oitavas, equal to £1275."

EL CALLAO.—Messrs. Baring Brothers and Co. (Limited) have received the following telegram from El Callao Mining Company:—"201-225 ounces of gold produced by El Callao Mine for past month; and 2126-2150 ounces by the Colombia Mine."

ELKHORN.—Bullion produced in the mill for the week ended October 27, 8800 ounces."

EMPRESS COOLGARDIE GOLD.—The company has received the following cablegram from Mr. F. Lane, dated Adelaide, 1st November:—"Arrived here safely yesterday Empress machinery. Everything is now ready."

FRANK JOHNSON AND CO.—Crushing from Lion Reef produced 3 ounces per ton; assay of tailings good.

GOLDEN FEATHER.—The following has been received by cable from Colonel Frank McLaughlin, the company's general manager at Oroville:—"Delayed by heavy storm, but now I am in a position whereby three weeks' labour preparing mine for winter guarantees sluicing in the richest portion of the claim, directly after the river turn next season. To devote remaining time to mining would be a fatal mistake." One of the directors, who, with the secretary, is now at the mine, cables as follows:—"Having heard and seen all, consider position justified, and that Col. McLaughlin has done his best. With elevator in present position and dams finished, consider that success in 1895 must follow. To ensure a complete success I advise to shut down when it can safely be done. Reconstruction is inevitable, then no further cause for anxiety. Splendid outlook for next season."

GRAVEL GOLD MINES OF COLOMBIA.—The directors have received the following cablegram of the result of run No. 9:—"We have cleaned up after a run of 45 days, during which time we have washed 720 hours. The gross returns are £550; the net profit is £250. We have been very short of water during this run."

KAPANGA.—The directors have received the following telegram from the manager, viz.:—"The tributers working in the Coromandel section on the new reef are getting rich ore. The richness of this run of gold has surpassed our expectations. There is every reason to believe that we are on the top of rich chutes of ore."

MILL'S DAY DAWN UNITED.—The directors have received the following telegram from Charters Towers:—"Have crushed during the month 3958 tons of quartz for a yield of 5243 ounces of gold. The approximate value of this return is £18,000, and the declaration of the usual monthly dividend payable on or about November 28 next will be announced in a subsequent cablegram."

MOUNT LEYSHON.—The Mount Leyshon (Limited) have received the following cablegram, dated 29th inst., from their manager at Charters Towers:—"Clean up 900 tons, crushed 198 ounces gold; 40 stamps mill ran 8 days; profit, £62."

MOUNT MORGAN.—The directors have received the following telegram from the head office, Rockhampton:—"We pay £25,000 on November 1, being dividend of 6d. per share (free of dividend tax) for the month of October."

NEW CHIMES.—Return for September. Stamps ran for 27½ days, crushing 3885 tons of ore, yielding 2066 3-20 ounces of gold, and about 40 tons concentrates, assaying 5 ounces to the ton; 2850 tons tailings yielded 445 1-10 ounces of gold.

NEW RIETfontein.—"Have struck very rich ore at No. 6 level in No. 2 shaft."

ORION.—Details of working for September:—Tons milled, 4967; stamps working, 40; number of days mill ran, 28½; yield from plates, 1280 50 ounces of gold; tailings treated by cyanide, 2538 tons; yield of bullion from cyanide works, 1511 05 ounces; net profit for month, £3122 8s. 7d. Dividend declared 10 per cent.

No. 1 NORTH GLANMIRE.—Mr. Samuel James, of 3, Cophall Chambers, E.C., has received the following cablegram, dated Gympie, 30th inst.:—"1 North Glanmire crushed 634 tons, yielding 966 ounces of gold. Dividend declared, 2s. 6d. per share."

NEW QUEEN.—The directors have received the following cablegram, dated Charters Towers, October 27, giving result of crushing for past fortnight:—"No. 1 formation 245 tons, yielding 335 ounces gold. About to commence crushing No. 4 formation 30th day of October. Have shipped per a.s. *Merkara* 784 ounces."

SHEBA.—The directors have received the following cablegram from the general manager for the month of October:—"3950 tons (2000 lbs.) of ore crushed, yield 1781 ounces; 6800 tons (2000 lbs.) tailings treated, yield 2175 ounces; 80 tons (2000 lbs.) concentrates (assay value) 715 ounces; total 4671 ounces."

SPITZKOP FARM.—The transfer of the above company will be closed on Monday, Tuesday, and Wednesday in next week.

TOLIMA.—The following cablegram has been received from the mines:—"Estimated profit for October over £3000." In the above return silver is valued at 29½d. per ounce.

TRANSVAAL GOLD EXPLORATION AND LAND.—The following has been received from the general manager:—"Trial run made; electric plant fairly satisfactory. Expect new battery will commence to work Monday. I will telegraph."

TWIN LAKES PLACERS.—The managing director reports that during the month of October 60,000 cubic yards of gravel were washed, and the bullion was produced of the estimated value of \$5000.

VICTORIA AND QUEEN.—Cablegram from Charters Towers:—"Call has been made of 6d. per share, payable 16th November, 1894."

VICTORY (Charters Towers).—The London Office has received the following cablegram from the head office in Sydney dated November 1:—"Crushing (for the fortnight) from No. 2 shaft 65 tons for 43 ounces. Clarke's Brilliant and Worcester shaft 120 tons for 72 ounces. Total 185 tons for 115 ounces of gold."

WAIHI GOLD.—Bullion return for 28 days ending 20th inst., £7800 from 2100 tons.

WORCESTER EXPLORATION.—Details of working for September:—Tons milled, 2021; stamps working, 20; number of days mill ran, 29; yield of gold, 2219 ounces 5 dwts.; concentrates, 418 ounces; total, 2637 ounces 5 dwts.

The Warden of the Murchison district has completed a 500 mile tour of inspection. He reports:—"New finds are being made in almost all directions, and everything points to the fact that this immense district is not yet by any means fully prospected. Though nothing very sensational is found as a rule, mining properties in the Murchison are of a substantial and permanent character, yielding good averages of gold."

One hundred and nineteen ounces of gold were brought down by the Demerara Ferry steamer on the 6th ult. for the Kanimapoo Gold Mining Company. This, the *Demerara Daily Chronicle* understands, is the result of a general clean up after a fortnight's working. The amount, though disappointing, is a decided improvement on the result of the first crushing which was carried over a period of 18 days. There is a decided improvement in the fineness of the gold, the first return being something less than 84 in 100 in point of standard as compared with 92 for the present return.

THE EDITOR'S LETTER BOX.

* It is to be understood that we do not assume responsibility for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, although these need not necessarily be published.

WHEEL GRENVILLE V. SOUTH CONDURROW.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—As the diallers for Wheel Grenville, perhaps you will kindly permit us, now that the case is concluded, to say a few words in justice to our clients and ourselves.

In the first place, we understand that considerable surprise has been expressed in mining circles that our Mr. James Henderson should have been reported to have said in Court that no working plan of a mine was accurate. What he did say, really, was that no working plan was reliable—it might be accurate and it might not; the element of uncertainty was so great that in all important matters special diallings were necessary. A few of the reasons for this uncertainty may not be without interest to your readers.

(1) Variation of the compass—The needle is, as is well known, subject to an annual variation. In keeping up a working plan from year to year this variation has, of course, to be allowed for; but only approximate allowance can be made, and such will ever be the case until magnetic records are taken in this county similar to those at Greenwich Observatory. Again, the needle is not only subject to an annual variation from the true north, but to diurnal fluctuations and to "magnetic storms," which cause considerable disturbance. Hence the older a mine plan is, the more likely it is, owing to the unknown variations of the needle during the diallers' work, to be unreliable. Local attraction in some mines is very great. At the Land's End, for instance, the general deviation of the needle for this year (1894) is $19\frac{1}{2}^{\circ}$ west of true north, while underground at Botallack Mine the variation from the true meridian is, in places, as much as 50 to 60° . Hence, while it is imperative, by reason of the small size and tortuous construction of the mine shafts, for every dialler of Cornish mines to depend upon the compass needle alone, he is ever apprehensive lest at one time or another, in the life of a working plan, magnetic storms, temporary local attractions, &c., may have occurred and thrown his work, so to speak, out of gear.

(2) Contraction and expansion of the paper on which the plan is drawn is a source of error which cannot be disregarded, seeing that the work has to be laid down at all times of the year.

(3) In keeping up the plan of a mine for any long period recourse must naturally be had to different assistants, each, perhaps, with different instruments. Perfect as the instruments may be, no two are exactly alike, or produce precisely the same results; while it is the same with the men.

For these reasons, when an important piece of work is in hand, the mine plan cannot be relied upon, and special diallings are necessary, and such special diallings, wherever possible, should be carried out at one and the same time by one and the same man, with one and the same instrument, and laid down on paper at one and the same time also.

It has gone forth to the public that in this important survey we failed to make use of the latest instruments and methods afforded by science. A large transit theodolite was produced in Court, and the system of triangulation and of plotting by co-ordinates dwelt upon with much force and to our supposed discomfort. As far as the theodolite is concerned we have, and have had for years, one of the same character in our office, while our Mr. James Henderson, as formerly a Government surveyor in Australia, is equally at home with the use of the theodolite, and the system of triangulation as he is with the use of a two-foot rule. It may be asked why we did not use our theodolite and plot by co-ordinates in the present case. We used the instruments which, from our long experience, we felt would give the results required.

A blow with the flat of the hand will kill a fly, quite as surely as a stroke from a sledge hammer, and it is a fact that the fine transit theodolite produced in Court was not taken underground at all. It was used by our opponents at the surface only, where it confirmed to a nicety the accuracy of our surface work done with the "Rapid" traverser with regard to the relative position of the shafts and boundary. We may ask, consequently, where does its vaunted superiority in such work come in?

In dialling underground, however, the surveyors on both sides employed the ordinary miner's "rack" dial, the use of the "Rapid" traverser being reserved by us for the levels only. With regard to the co-ordinate system of plotting, it is one we are perfectly familiar with, and adopt in almost every case of extensive surveys where we are unable to obtain what is technically known as a "closed traverse." In the present instance, knowing the importance of the work, we took very considerable pains and dialled a long distance to obtain a closed traverse. The traverse we made "tied in" to our entire satisfaction, thus proving the accuracy of the work, and dispensing with the necessity of checking by co-ordinates.

For our opponents there was no "closed traverse." Their work remains what is technically known as an "open traverse," which is, necessarily, open also to doubt and uncertainty. It has been alleged that the two surveyors for South Condurrow corroborated each other. Such is not, however, the fact, as there is a glaring discrepancy in the plan produced by each, extending to as much as 8 feet, in a part of the underground survey, in close proximity to two of the alleged encroachments. Fortunately for them, this difference is in an easterly and westerly direction. Had the boundary between the two mines been in any other direction than what it is, where would the corroboration have been? An important point might have been made at the trial of the serious discrepancy between the defendants' two plans, which was discovered by us only at almost the last moment, but the matter was permitted to slip, and the impression on the public mind that the defendants' plans corroborated each other was allowed to remain.

No such difference, or anything approaching to it, existed in the Wheel Grenville plans, and we should have been glad if the Vice-Warden had commented, when giving his judgment, on this circumstance. We make these remarks with no invidious feeling towards our professional opponents, for one of whom, as the result of a long acquaintance, we entertain the highest opinion. They have won the day, and we submit to our defeat with the best grace we are capable of. But we feel it a duty to ourselves and to our numerous clients to explain matters which might otherwise appear to the latter quite inconsistent and obscure.—Yours, &c.,
HENDERSON AND SON, C.E.
Truro, October, 1894.

COOLGARDIE GOLD FIELDS.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—I notice in your issue of October 27 a paragraph stating that Mr. Samuel Gifford, a representative of Messrs. John Taylor and Sons, has reported that he is unable to recommend any of the Coolgardie properties offered to him. You regard it

as at the least "very singular." Perhaps you will allow me to offer you a possible explanation.

Mr. Gifford left Coolgardie (I think) the first week in May. Full work on the field had only been recently resumed there after the three months' exemption granted by the Government during last summer, and Bayley's stood alone as the one very rich mine.

I arrived on April 28, and was in Coolgardie till July 14. Personally I was satisfied on the day of arrival that the reefs would live by an inspection of Bayley's down to 240 feet. Every day of my stay everyone worked everywhere energetically, new discoveries were made, and developments proceeded with. At the end of June the Londonderry burst upon the township, amazing even the most sanguine speculator. Later still, after my departure, the Wealth of Nations was discovered; rich stone was struck at Siberia, &c., &c.

I can only repeat that I believe had Mr. Gifford awaited developments, he would have been satisfied. A firm of assayers and metallurgists from Bendigo (Victoria) assured me a few days before I left that there were 3-ounce reefs all round Coolgardie. My own impressions you already have in your interview of October 13.

In the meantime, however, I am very glad to hear that English capital is at last being directed to Victoria. That it is a move thoroughly justified by my own knowledge of the resources of the older Australian gold fields assures me.—I am, yours truly,
J. FRANCIS MARKES, F.G.S., &c.

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.E.

Champ d'Or.

The development being pushed ahead, and the ore opened up continues in richness, the present rate of output will be easily maintained. The shares are good buying at present price.

Champ d'Or Deep Levels.

When the mill starts in November the ore put through the first month will average 14 dwts., and the next month I expect it will be 20 dwts. These shares should also be bought at present price.

Princess.

The property consists of 5000 feet of outcrop and 3000 feet of dip ground, and under the present efficient management the future prospects of the company are distinctly good. There are two reefs in the mine, with an average dip of 40° . The first may be called the south reef, and possesses all the characteristics of the leader found on the Durban Roodepoort. It is 6 inches wide, highly payable, with improvement both as to width and quality as depth is reached. The second reef, which varies from 3 to 6 feet in width, and now being prospected with very encouraging results, and with a large mill and cyanide plant, is undoubtedly a payable one. It has been clearly shown lately that the rich shoot of gold which had been opened up on the United Main Reef and the Durban Roodepoort, and from which such highly payable returns have been made, is also in the Princess. It dips west into the property. This accounts in a large measure for the improved returns which are being made from the lower levels. Twelve months ago prospects were anything but cheery. But now that development is well ahead, and rock sorting is taking place with Mr. Spencer at the head of affairs, returns will undoubtedly augment month by month. The stopes have been worked for a width of 3 feet, of which only 6 inches is payable. Such action resulted in a 4 dwts. show. Now that the 6 inches goes to the mill the gold return is augmented by 250 per cent., and it may confidently be predicted that the lower levels will give quite 12 dwts. Having in view the fact, as before mentioned, that the company owns its own deep levels, the mine may be reckoned to have a life of 30 years, and amalgamation is not required. The new reconstruction scheme will put the company in a strong financial position, with ample funds at its disposal for the erection of the additional machinery required for working so large and promising a concern. Viewing the matter all round, the conclusion is forced on one that dividends at the rate of 30 per cent. per annum are practically assured in the near future, and a market price of 50s. per share imminent. All that is now wanted is adequate machinery, which no doubt shareholders at the coming meeting will be only too willing to supply.

Bonanza.

Active development work is now proceeding on this property under the superintendence of Mr. Spencer, of the Princess, who is consulting engineer. The rich south reef of the Robinson is already proved to be present. This will give (mill and cyanide) 1 ounce returns. It goes without saying that such a return spells prosperity for the Bonanza. A calculation has been made, with every probability of realisation, that before this property is worked out, a return equal to 400 per cent. will be forthcoming.

Glencairns.

The 5 feet reef, at the 4th and 5th levels, in the eastern drives, has during the last few days been panned systematically by the management, with more than satisfactory results. Although the ore is highly pyritic, a high percentage of free gold augurs well for the yield per stamp when crushing commences on this reef.

Benoni Syndicate.

The marked improvements that have lately been shown to have taken place in the eastern portions of these fields have naturally greatly enhanced the value of this syndicate's property. To those who are not clear on this point, it may be as well to state that the chances of securing the western extension of the reefs running through the Chimes, Kleinfontein, Modderfontein, and Van Ryn properties is practically assured. Why this has not been done before is easily accounted for, the reason being that the surface soil is very heavy, and the country rock somewhat disturbed. However, the reefs are there all the same. As tending to show the value of the property, one has only to remember that the aforementioned companies, viz., the Chimes, Kleinfontein, Modderfontein, and Van Ryn aggregate a monthly profit of £12,000.

Mulder's Farm.

The development work going on along the line of reefs contained in the Orion, Cornucopia, Golden Kopje, and Meyer and Leeb, goes to show clearly that all the rich shoots of gold found on them dip into Mulder's Farm. This property is in the same relative position to the series of reefs as the Rand mines holds to the main reef series, viz., having all the dips of the best mines.

SOME very fine specimens of gold ore have been found on the north fork of the Kettle River, British Columbia.

A WEEK'S clear up at the Ontario mine, Utah, was 25,000 ounces of fine silver.

THE gold output for this year at Cripple Creek will probably exceed \$5,000,000, says the Nelson Miner.

A QUANTITY of high grade cube galena has been struck on the High Ore, a fraction situate between, says the New Denver correspondent of the Miner, B. C., the Idaho and the Cumberland.

It is reported that a further important discovery of gold has been made this week near Coolgardie. The rock, which is said to be wonderfully rich, was found some 90 miles north of Coolgardie, on the borders of Lake Carey, and close to Mount Margaret.

CASSEL V. CYANIDE.—It is expected that Mr. Justice Bomer will deliver judgment in this case in the course of a few days.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, NOVEMBER 2.

Copper.

THE speculative market for G.M.B.'s opened quiet, but in steady tone at £40 15s. s.c., but the moderate quantities offered sufficed to depress values somewhat, three months going from £41 3s. 9d. to £41 1s. 3d., and £40 13s. 9d. being accepted for s.c. The turnover for the day was about 375 tons, and that for the following day only 175 tons at unchanged prices. Wednesday's market was distinguished by much more animation, and the presence of several buying orders both for prompt and forward G.M.B.'s, in consequence of which we had a rise of 2s. 6d., £40 16s. 3d. being paid for cash. The quantity which changed hands on Wednesday was about 650 tons. On Thursday, despite the statistics, showing a decrease of 200 tons in the visible supplies, the market was depressed, £40 13s. 9d. s.c. being done. To-day values receded again, the shipments from America advised being rather heavier than had been anticipated. £40 6s. 3d. was taken for s.c., and the market closes quiet, though a trifle firmer at £40 6s. 3d. to £40 7s. 6d., s.c., and £40 12s. 6d. to £40 13s. 9d. three months.

Tin.

opened in rather firmer tendency, and continued to improve, three months changing hands at £67 5s. up to £67s. 12s. 6d., whilst for s.c. £67 to £67 5s. was paid. There was no special feature, a few buying orders accounting for the improvement, which was maintained again on Tuesday, when three months' Straits was done at £67 15s. The turnover for the two days amounted to about 265 tons total. Wednesday's markets developed considerable strength, the satisfactory deliveries wired from Holland probably having something to do with the purchases made here by speculators. The day's transactions totalled about 260 tons, and up to £68 was paid for s.c., whilst this position rose on Thursday to £68 10s., the close that day being, however, weaker at £68 2s. 6d. To-day, on lower advices from America, and statements to the effect that large numbers of men at South Wales tin-plate works are about to be sent off, the market fell heavily, and closes dull at £67 to £67 1s. 3d. s.c., and £67 5s. to £67 6s. 3d. three months. In the Dutch market there has been a steady advance, Billiton having opened at fl. 40½ s.c., and touching successively fl. 40½, fl. 40½, and fl. 41, closing at the highest. Banca closes at fl. 41½, as compared with fl. 41½ last week's final figure.

Pig Iron.

The Glasgow market opened at 42s. 9d., a month in firm tendency, and touched 42s. 9d., whilst s.c. was dealt in at 42s. 7½d. Later the tone fell off, and 42s. 6½d. s.c. was done on Monday, and 42s. 6d. on Tuesday. Wednesday's business in s.c. was at 42s. 6½d. and 42s. 7d., Thursday's at 42s. 9½d. to 42s. 7d., and to-day's at 42s. 6½d. to 42s. 8d. The market closes firm with buyers at 42s. 8d. s.c., and 42s. 9d. a month, Scotch. For hematites 43s. 7½d., and for Middlesbrough 35s. 8½d. are the closing values. The shipments from Scotland last week were 5178 tons, or 1180 tons less than in the corresponding week of last year.

Lead.

A considerable quantity has been done recently at £9 16s. 3d. for soft foreign. The market closes after business at £9 17s. 6d. firm at £9 17s. 6d. for soft foreign, and £10 for English.

Spelter.

opened dull, and ordinaries were easier at £14 17s. 6d. We close rather firmer at £14 18s. 9d. ordinaries, specials being quoted at £15.

Antimony.

continues steady at £33 to £34.

Quicksilver.

likewise steady, firsts being quoted £6 15s., and seconds £6 9s. 6d., to £6 10s.

The following are to-night's (November 2) prices of metals:—

Copper.			
Tough cake and ingot	...	£ s. d.	...
Best selected	...	43 10 0	...
Sheets and sheathing	...	43 15 0	...
Flat bottoms	...	51 15 0	...
Chill bars	...	54 15 0	...
Good merchantable, spot, & 3 months respectively	...	40 7 6	...
Copper tubes, seamless	...	0 0 7½	...
Alloys.			
BRASS: Wire	...	0 0 5	...
" Tubes (solid drawn)	...	0 0 5	...
" Sheets	...	0 0 5½	...
PHOSPHOR BRONZE: Alloys II.	...	75 0 0	...
" " III. or V	...	81 0 0	...
" " VII.	...	83 0 0	...
" " XI.	...	72 0 0	...
" " Vulcan brand A1	...	72 0 0	...
DURO METAL	...	72 0 0	...
BULL'S METAL	...	65 0 0	...
Ferrobrown (Vivian's).			
Ingots	...	0 0 5½	...
Ordinary sheets, plates, bolts and bars	...	0 0 6½	...
Screw bolts and nuts	...	0 0 8	...
Pump rods, plain	...	0 0 7	...
" finished	...	0 0 10	...
DELTA METAL: No. 4 (per ton)	...	73 10	...
" Sheets and plates (per lb.)	...	0 0 10½	...
" Bars, round, square, flat (per lb.)	...	0 0 9½	...
" hexagon (per lb.)	...	0 0 9	...
Tin.			
English, ingots, f.o.b.	...	69 15 8	...
" bars	...	70 15 0	...
" refined	...	71 15 0	...
Straits, spot and 3 months respectively	...	67 0 0	...
Australian spot, and three months respectively	...	67 2 6	...
Banca (in Holland)	...	69 15 0	...
TIN PLATES: Charcoal, best quality	...	per box 0 15 0	...
" ordinary	...	0 12 0	...
" Coke, best quality	...	0 10 3	...
" ordinary	...	0 10 0	...
These prices of tinplates are f.o.b. at Swansea; at Liverpool 8d. per box more.	...	...	...
Iron.			
Fig. G.M.B., f.o.b., Clyde, spot	...	2 2 5½	...
" Scotch pig, No. 1 Gartsherrie	...	2 12 6	...
" " Coltness	...	2 15 6	...
" " Clyde	...	2 10 6	...
" " Govan	...	2 4 0	...
Bars, Welsh, f.o.b. Wales	...	5 3 8	...
Plates	...	5 5 0	...
Bars, Staffordshire, at works	...	6 10 0	...
Sheets	...	6 5 0	...
Plates	...	6 12 6	...
Hoops	...	4 17 6	...
Ship plates, Middlesbrough	...	8 10 0	...
STEEL: English spring	...	43 0 0	...
" cast	...	4 10 0	...
" Rails at works, according to section	...	3 15 0	...
Lead.			
Spanish or soft foreign	...	9 17 6	...
English pig, common	...	10 0 0	...
" L.B.	...	10 10 0	...
" sheet and bar	...	11 0 0	...
" pipe	...	11 10 0	...
" red	...	12 10 0	...
" white	...	16 10 0	...
" patent shot	...	14 15 0	...
Spelter.			
Silesian ordinary brands	...	14 15 0	...
" special brands	...	15 0 0	...
English Swans	...	15 10 0	...
Sheet Zinc	...	18 6 0	...
Antimony.			
Antimony	...	33 0 0	...
Quicksilver.			
Flasks, 75 lbs. warrants	...	6 0 8	...
Ore, c.i.f., U.K. ports	...	0 0 10½	...
1st quality, 50 per cent. and upwards	...	0 0 9	...
2nd " 47 per cent. to 50 per cent.	...	0 0 8	...
3rd " 45 " 47 per cent.	...	0 0 8	...
Aluminium.			
98-99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)	...	0 1 5	...
do	...	0 1 4	...
Nickel.			
98-99 per cent. guaranteed	...	0 1 4	...

Anglo-Chilian P.N.	5½	5½	5½	100	0	4/5 Dec. '89	10	0	35,000	Antofagasta ...	123, Bishops-st. W.
Do. 6% RybtMB	95	95	95	100	0	6½ July, '94	100	0	2,800,000	Antofagasta ...	123, Bishop-gate-st. W.
Antio. (Pref.) G.S.	—	—	—	1	0	-7/8 Mar. '90	1	0	22,252	Colombia ...	184, Gresham Ho.
Antioquia (ordiny)	—	—	—	1	0	—	1	0	42,453	Colombia ...	184, Gresham Ho.
Callao Bils. G	1/3	1/9	1/3	1	0	—	1	0	316,248	Venezuela ...	226, Winchester Ho.
Camaronas. G	—	—	—	2	0	—	2	0	67,000	Chili ...	113, Bishop-gate-st. W.
Caratal. G	-7/14	-1/10	-7/15	2	6	—	0	2	6,330,003	Venezuela ...	57, Moor-gate-st. W.
Cayalla. G	1½	1½	1½	1	0	1/- Apr. '94	1	0	35,000	Peru ...	32, Leadenhall street
Colon. G	-7/8	-7/8	-7/8	1	0	—	1	0	200,000	Colombia ...	6, Copthall-bldg. E.
Colorado Nit. N	2½	3½	3½	10	0	4½ June, '94	5	0	32,000	Chili ...	18, King-st., Liverpool
Colombia. G	—	—	—	1	0	10½ Apr. '94	20	0	100,000	Venezuela ...	Cludad, Bolivar.
Colombian Hy. G	13½	-14	13/8	1	0	1/- Sept. '94	1	0	75,000	Colombia ...	10, Blomfield-street
Coplapo. G	11½	11½	11½	2	0	1/6 June '84	2	0	100,000	Chili ...	Dashwood House, E.
Darien "A" G	1½	1½	1½	1	0	—	1	0	49,553	Colombia ...	Manchester.
Don Pedro. G	4/8	5/8	4/8	1	0	—	0	16	133,102	Brazil ...	24-5, Devonsh. Ct. E.
El Callao. G	10/-	15/-	10/-	5	0	9½ Feb. '94	5	0	867,600	Venezuela ...	8, Bishop-gate-st. W.
Frontino & B. G	23/-	24/-	23/-	1	0	1/- Sept. '94	1	0	128,662	Argen. (& Ind)	184, Gresham Ho.
Glenrock. G	1/-	1/8	1/-	1	0	—	0	16	198,948	Argen. (& Ind)	2-5, Queen-street, E.
Glenrock (Pref.) ... G	—	—	—	1	0	—	0	16	16,232	Argen. (& Ind)	2-5, Queen-street, E.
Gravel. G	5/8	6/8	5/8	1	0	—	0	19	100,000	Colombia ...	10, Blomfield-street
Guadalupe. G	3/5	5/8	3/8	1	0	—	1	0	180,000	Honduras ...	11A, Union-st. Old Bld
Huanchaca. G	—	—	—	5	0	4/- Sept. '94	5	0	320,000	Bolivia ...	10, Avnu. d'Alma, Paris
Javal. G	-7/8	1/8	-7/8	0	2	3½ % '91	0	2	105,234	Miarguaru.	129, Cannon-street
Julia Taitai. G	5½	5½	5½	1	0	—	0	19	50,000	Chili ...	79½, Gracechurch-st.
Lagunas. A	5½	5½	5½	5	0	—	5	0	120,000	Tarapaca ...	3, Gracechurch-st.
Lagunas Syndicate. G	17½	18½	17½	5	0	25 Oct., '94	5	0	55,000	Tarapaca ...	3, Gracechurch-st.
Lautaro. G	6½	7	6½	0	0	5/- June '94	5	0	110,000	Chili ...	70, Gracechurch-st.
Liverpool. N	11½	12½	11½	5	0	16/- June '94	5	0	300,000	Chili ...	12, Liverpool-st.
Loma. G	-7/8	1/8	-7/8	1	0	—	1	0	300,000	Colombia ...	6, Copthall-bldg. E.
London Nit. N	2½	3½	2½	3	0	3/4½ Nov. '89	5	0	10,000	Chili ...	9, Gracechurch-st.
London Nit. (Pref.) ... G	4½	4½	4½	0	2	5/- June, '94	0	2	82,000	Chili ...	9, Gracechurch-st.
Masate. G	10/8	3/3	10/8	0	2	—	0	2	200,000	Peru ...	11, Old Broad-st. E.
New Granada. G	3½	3½	3½	1	10	2½ p.c. Aug. '94	1	10	130,000	Tarapaca ...	80, Lime-street, E.
Do. 8 % Cum Pref	15½	15½	15½	1	10	5 p.c. Aug. '94	1	10	130,000	Tarapaca ...	80, Lime-street, E.
Do. 6 p.c. Debs	80	80	80	100	0	6 p.c. Aug. '94	100	0	2,260,000	Tarapaca ...	50, Lime-street, E.
Orlita. G	2/3	2/3	2/8	1	0	1/- April '93	1	0	30,000	Colombia ...	10, Blomfield-street
Ouro Preto. G	—	—	—	1	0	—	0	16	80,000	Brazil ...	6, Queen-street-plac.
Pao & Jazampapa. G	4½	4½	4½	5	0	5/- Aug. '94	5	0	72,000	Tarapaca ...	3, Gracechurch-st.
Primitiva. N	2½	2½	2½	5	0	10 % Oct. '99	5	0	60,000	Chili ...	Liverpool-st.
Quebrada. N	4½	5½	4½	0	2	5 % Mar. '92	100	0	241,000	Venezuela ...	28, Nicholas Lane.
Quebrada. C	40	50	40	8	0	5 % Feb., '94	8	0	240,000	Venezuela ...	28, Nicholas Lane.
Rosario. N	103	105	103	100	0	6 % Oct. '94	100	0	120,000	Chili ...	57½, Old Broad-street
Rosario (8 % Deb.	27½	28½	27½	1	0	10 % June '93	1	0	224,200	Brazil ...	57½, Old Broad-street
Do. John Day. G	2½	2½	2½	5	0	—	5	0	32,000	Chili ...	98, Tower-chmbrs. E.
San Jorge. N	5½	5½	5½	5	0	7/8 Sept. '94	5	0	75,000	Chili ...	12, King-st., Liverpool
San Pablo. N	3½	3½	3½	5	0	2½ % Nov. '94	5	0	32,000	Chili ...	3, Gracechurch-st.

"THE MINING JOURNAL" SHARE LIST—(Continued).

SOUTH AND CENTRAL AMERICAN MINES—(Continued).

Name.	Closing Price, Nov. 2, 1894.	Closing Price, Oct. 26, 1894.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Santa Barbara	1 1/4	1	1	1/3 Dec. '93	1 00	80,000	Brazil	Liverpool
Santa Elena	3 1/4	3 1/4	3 1/4	5/5 Oct. '94	5 00	22,000	Tanapaca	3, Gracechurch-st.
Santa Rita	2 1/4	2 1/4	2 1/4	1/5 Apr. '94	5 00	20,000	Chili	Dashwood House, E.O.
San Sebastian	—	—	—	1/5 May '94	5 00	20,000	Chili	Dashwood House, E.O.
Sagovia	—	—	—	—	5 00	160,000	Colombia	5, Copthall-buildings
S. de P. Pref.	—	—	—	10% July '94	1 00	840	Colombia	23, St. Swithin's-lane
Sure Ord.	—	—	—	8% July '94	1 00	10,000	Colombia	23, St. Swithin's-lane
Tetuan	8 1/2	9	8 1/2	10% Aug. '94	10 00	200,000	Colombia	5, Copthall-buildings
Tolima "A"	7 1/2	8	7 1/2	10% Aug. '94	10 00	14,000	Colombia	18, Finsbury-circus
Do. "B"	—	—	—	—	5 00	5,000	Colombia	18, Finsbury-circus
Vic. & Altamira	—	—	—	—	5 00	200,000	Venezuela	Broad-st. Avenue.
West Indian	—	—	—	—	5 00	700,000	San Domingo	49, Queen Victoria-st.
Zaruma	—	—	—	—	5 00	261,422	Ecuador	1, Gt. Winchester-st.

AFRICAN MINES.

Afrikaner	1 1/4	1 1/4	1 1/4	—	1 00	40,000	Transvaal	19, St. Swithin's-lane
Agnes Block	10 1/2	12 1/2	10 1/2	—	1 00	78,507	Transvaal	54, Old Broad-street
Alexandra Estate	6 1/2	6 1/2	6 1/2	—	1 00	225,000	Witwatersd.	Warnford-court, E.O.
Appantoo	—	—	—	—	1 00	71,000	West Coast	9, New Broad-street
Aurora	12 1/2	13 1/2	11 1/2	5% Mar. '93	1 00	65,000	Witwatersd.	8, Old Jewry
Balks Eersteling	—	—	—	—	0 98	520,000	Transvaal	85, Gracechurch-st.
Balks Land	2 1/2	2 1/2	1 1/2	—	0 100	520,000	Transvaal	85, Gracechurch-st.
Banket	—	—	—	—	1 00	200,000	Witwatersd.	Johannesburg.
Banket Reef	15 1/2	16 1/2	15 1/2	—	1 00	83,000	Witwatersd.	Warnford-court, 11
Barrett	3 1/2	3 1/2	3 1/2	—	0 90	207,498	De Kaap	17, Basinghall-street
Bechuanaaland Exp.	23 1/2	24 1/2	24 1/2	—	1 00	200,000	Bechuanaaland	19, St. Swithin's-lane
Block "B" Lang.	7 1/2	8 1/2	7 1/2	—	1 00	535,000	Witwatersd.	8, Prince-st., E.C.I.
Booyen Land	19 1/2	21 1/2	19 1/2	—	0 110	95,000	Transvaal	4, Fakenhouse-bldg.
Do. Pref.	—	—	—	—	1 00	71,175	Transvaal	4, Fakenhouse-bldg.
Brit. S. A. Char.	35 1/2	37 1/2	36 1/2	8% Mar. '94	1 00	2,000,000	Transvaal	19, St. Swithin's-lane
Buffelsdorp	31 1/2	33 1/2	30 1/2	—	1 00	250,000	Potchefstroom	8, Old Jewry
Buluwooyind	1 1/4	1 1/4	1 1/4	—	1 00	12,000	Matabeleland	10, Helen's Place.
Cape Copper	17 1/2	18 1/2	17 1/2	1/3 June '94	2 00	300,000	Cape Colony	9, Queen-street-place
Do. 6% Pref.	1 1/2	1 1/2	1 1/2	1/3 June '94	2 00	45,000	Cape Colony	9, Queen-street-place
Can. Montrose	1 1/2	1 1/2	1 1/2	—	0 188	69,000	Transvaal	15, George-st. Ho.
Champ d'Or	2 1/2	2 1/2	2 1/2	—	1 00	116,016	Witwatersd.	8, Old Jewry, E.C.
Champ d'Or	2 1/2	2 1/2	2 1/2	—	1 00	75,000	Witwatersd.	Fox-st., Johannesburg
City and Suburb. G.	10 1/2	10 1/2	10 1/2	25% Mar. '94	1 00	75,000	Witwatersd.	1, Crosby Square, I
Coetzestroom	1 1/2	1 1/2	1 1/2	—	0 80	140,500	De Kaap	105, Leadenhall-street
Con. Bultfontein D.	26 1/2	27 1/2	26 1/2	5% Nov. '89	1 00	721,500	Griqualand W.	62, Lombard-st.
Con. Deep Levels G.	2 1/2	2 1/2	2 1/2	4% June '94	1 00	187,250	Transvaal	30, St. Swithin's-lane
Con. G. Fields S.A.	21 1/2	22 1/2	21 1/2	15% Nov. '94	1 00	1,250,000	S. Africa	8, Old Jewry.
Con. 5% Deben.	10 1/2	10 1/2	10 1/2	5% July '94	5 00	60,000	S. Africa	8, Old Jewry.
Crown Reef	9 1/2	9 1/2	9 1/2	25% Nov. '94	1 00	120,000	Witwatersd.	120, Bishopsgate-st. Wn
De Beers Consol. D.	17 1/2	17 1/2	17 1/2	12% June '94	5 00	789,791	Transvaal	62, Lombard-street
Do. 5% 1st Deb.	104	105	104	5 1/2% Feb. '94	5 00	21,875,000	Transvaal	62, Lombard-street
Do. 5% 2nd Deb.	102	103	102	5 1/2% Oct. '94	5 00	2720,100	Transvaal	62, Lombard-street
Durban Roodeport G.	5 1/2	5 1/2	5 1/2	3 1/2 Sept. '94	1 00	218,000	Witwatersd.	28, Leadenhall-bldg
East Rand	22 1/2	24 1/2	22 1/2	—	1 00	575,000	Witwatersd.	170, Winchester-ho.
Evelyn	1 1/2	1 1/2	1 1/2	10% Jan. '89	1 00	60,000	Witwatersd.	8, Old Jewry, E.C.
Exploration	1 1/2	1 1/2	1 1/2	1 1/2 Dec. '93	0 40	140,000	S. Africa	30, St. Swithin's-lane
Exploring Co.	4 1/2	4 1/2	4 1/2	25% Feb. '94	1 00	69,350	S. Africa	19, St. Swithin's-lane
Ferreira	10 1/2	11	9 1/2	10% June '94	1 00	45,000	Witwatersd.	120, Bishopsgate-st. Wn
Forbes Reef (Nw) G.	4 1/2	5 1/2	4 1/2	—	0 190	108,000	De Kaap	45-6, Leadenhall-st.
Geldenhuis Deep G.	5 1/2	5 1/2	5 1/2	—	1 00	265,000	Transvaal	30, St. Swithin's-lane
Geldenhuis Est. G.	5 1/2	5 1/2	5 1/2	10% Sept. '94	1 00	187,500	Witwatersd.	120, Bishopsgate-st. Wn
Do. Main Reef	18 1/2	19 1/2	18 1/2	—	1 00	150,000	Witwatersd.	14, Threlkeld-st.
George and May G.	17 1/2	18 1/2	17 1/2	—	1 00	100,000	Witwatersd.	Warnford Court, E.O.
George Goch	47 1/2	48 1/2	47 1/2	—	1 00	100,000	Witwatersd.	Johannesburg.
Glencairn	47 1/2	48 1/2	47 1/2	5 p.c. Aug. '94	1 00	200,000	Witwatersd.	2, Drapers-gardens
Gold Estates T. G.	3 1/2	3 1/2	3 1/2	15% Dec. '89	0 100	130,000	Transvaal	45, Queen Victoria-st
Gld. F. Deep. G.	7 1/2	7 1/2	7 1/2	—	1 00	800,000	S. Africa	8, Old Jewry.
G. F. of Mashoon. G.	7 1/2	7 1/2	7 1/2	—	1 00	200,000	Mashoonland	19, St. Swithin's-lane
G. F. of Fugro	2 1/2	2 1/2	2 1/2	—	0 40	400,000	Mashoonland	2, Fakenhouse Bldg.
Grahamstown	11 1/2	12 1/2	10 1/2	—	1 00	150,000	Witwatersd.	85, Gracechurch-st.
Graskop	1 1/2	1 1/2	1 1/2	2 1/2 Mar. '91	0 40	800,000	Lydenburg	85, Gracechurch-st.
Griqualand W. D.	6 1/2	7 1/2	6 1/2	4 1/2 Mar. '94	10 00	105,700	Transvaal	62, Lombard-street
Henry Nourse	3 1/2	4 1/2	3 1/2	—	1 00	100,000	De Kaap	Warnford-court.
Joe's Reef	7 1/2	8 1/2	7 1/2	—	1 00	57,404	De Kaap	21, Mining Lane.
Johannesburg For.	5 1/2	6 1/2	5 1/2	12 1/2 Nov. '93	1 00	21,000	Witwatersd.	Johannesburg.
Jubilee	6 1/2	6 1/2	6 1/2	30% Oct. '94	1 00	30,000	Witwatersd.	8, Old Jewry.
Jumpers	5 1/2	5 1/2	5 1/2	30% June '94	1 00	100,000	Witwatersd.	120, Bishopsgate-st. Wn
Kimberley	12 1/2	13 1/2	12 1/2	—	0 100	98,672	Kimberley	19, Finsbury-circus
Kimberley Bdpt.	12 1/2	13 1/2	12 1/2	—	1 00	125,000	Kimberley	2, Drapers-gardens
Kleinfontein (N) G.	2 1/2	2 1/2	2 1/2	—	1 00	150,000	Witwatersd.	8, Old Jewry.
Klerksfontein New G.	2 1/2	3 1/2	2 1/2	—	0 10	50,000	Transvaal	110, Cannon-street
Kofffontein	2 1/2	3 1/2	2 1/2	—	0 50	50,000	Jacabadal	4, Bishopgate street

AFRICAN MINES—(Continued).

Name.	Closing Price, Nov. 2, 1894	Closing Price, Oct. 25, 1894.	Par.	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Langlaagte Est. G	3 3/4	3 3/4	3 3/4	3 s.	2/- Oct. '94	1 0 0	Witwatersd.	59, Holborn Viaduct, I
Do. Royal	2 1/2	3 1/4	3 1/4	1 0	5% Sept. '93	1 0 0	Witwatersd.	2, Drapers-gardens, I
Lisbon-Berlyn ..	2 3/4	2 3/4	2 3/4	2 3/8	—	3 2 6	Lydenburg	110, Cannon-street.
London & S. A. Ex.	10 1/2	10 1/2	10 1/2	1 0	2 1/2 Sept. '94	0 10 0	S. Africa	19, Finsbury-circus.
Loupards Vlei Est.	10 1/4	10 1/4	10 1/4	1 0	6% Mar. '90	1 1 0	Witwatersd.	Warnford-court, I
Do, do, do.	3 1/2	3 1/2	3 1/2	1 0	—	1 10 0	Witwatersd.	8, Old Jewry.
Main Reef (New) G	7 1/2	8 1/2	7 1/2	1 0	—	0 10 0	Witwatersd.	8, Old Jewry.
May Con. (New) G	1 1/2	1 1/2	1 1/2	1 0	—	1 0 0	Witwatersd.	4, Lothbury, I
Mashon Agency...	1 1/2	1	1	1 0	—	0 10 0	Mashonland	8, Old Jewry, E.C.
Mashon Central...	—	—	—	12 1/2	—	1 0 0	Mashonland	8, Old Jewry, E.C.
Matabeleland	1 1/2	1 1/2	1 1/2	1 0	—	1 12 1/2	Matabeleland	73, Basinghall St. E.O.
Metropolitan (N) G	6 1/2	6 1/2	6 1/2	1 0	25% June '94	1 0 0	Witwatersd.	1, Crosby Square, I
Meyer & Charl. G.	6 1/2	6 1/2	6 1/2	1 0	3% May '94	1 0 0	Witwatersd.	Warnford-court, I
Mines Trust	3 1/2	3 1/2	3 1/2	1 C	3% May '94	1 0 0	So. Africa	137, Winchester Ho.
Modderfontein...G	3 1/2	3 1/2	3 1/2	1 0	—	0 200,000	Witwatersd.	Warnford-court, I
Montrose	3 1/2	3 1/2	3 1/2	1 0	3/- Feb. '90	1 0 0	De Kaap	65, New Broad-street
Moodies G. & E. G.	9 1/2	10 1/2	9 1/2	1 0	-4 1/4 May '90	1 0 0	De Kaap	8, Old Jewry, I
Mozambique	11 1/2	13 1/2	11 1/2	1 0	—	1 0 0	S. E. Africa	Broad-street House.
Namaqua	18 1/2	18 1/2	18 1/2	2 0	2 1/2 July '91	2 0 0	Namaqualand	34, Leadenhall-blds.
New Aurora West G	8 1/2	9 1/2	8 1/2	1 0	5% Mar. '93	—	Witwatersd.	1, Crosby Square, I
New Black Reef ..	-16	1/2	-10	-1 0	—	1 0 0	Witwatersd.	9, King William-st.
New Chimes	2 1/2	2 1/2	2 1/2	1 0	5% Oct. '94	1 0 0	Witwatersd.	9, Old Jewry, E.C.
New Clever Estate	1 1/2	1 1/2	1 1/2	1 0	—	1 0 0	Lydenburg	120, Bishopsgate-st. Wn
New Cross	1 1/2	1 1/2	1 1/2	1 0	5% Aug. '92	1 0 0	Witwatersd.	4, Bishopsgate-st. Wt.
New Edwile Brav	3/-	4/-	3/-	7 0	—	7 0 0	De Kaap	22, College Hill
New Gordon	2 1/2	3 1/2	2 1/2	1 0	5% Dec. '89	1 0 0	Griqualand	110, Cannon-street
New Heriot	5 1/2	5 1/2	5 1/2	1 0	20 p c Sept. '94	1 0 0	Witwatersd.	1, Crosby Square, I
New Jagersf.	18 1/2	18 1/2	18 1/2	10 0	10s. Nov. '94	10 0 0	Transvaal	5, Copthall-buildings
New Primrose	7/-	7 1/2	6 1/2	1 0	—	1 0 0	Witwatersd.	53, New Broad-street
New Rietfontein G	2 1/2	3 1/2	2 1/2	1 0	20% July '94	1 0 0	Witwatersd.	2, Drapers-gardens.
New S. Augustine D	-16	-19	-7 1/2	1 0	—	0 190	Witwatersd.	Warnford-court, E.C.
New Salisbury	2 1/2	3 1/2	2 1/2	1 0	—	1 0 0	Griqualand W	30-1, St. Swithin's-lane
New Spies Bona ..	10 1/2	11 1/2	10 1/2	1 0	—	1 0 0	Witwatersd.	1, Crosby-square, I
N. Ophir Concess. ..	1 1/2	1 1/2	1 1/2	1 0	—	0 126	E. Coast Africa	24, N. John-st., Lpl
New Virginia	3 1/2	3 1/2	3 1/2	1 0	—	0 18 6	Transvaal	31, Lombard-street.
Nigel	3 1/2	3 1/2	3 1/2	1 0	15% Sept. '94	1 0 0	Witwatersd.	28, Budge-row, E.C.
Noitgedacht E. G.	—	—	—	1 0	—	1 0 0	Lydenburg	1, Crosby-square.
Oceana	1 1/2	1 1/2	1 1/2	1 0	25/- Nov. '89	1 0 0	Transvaal	8, Old Jewry.
Oceana Developmt	3 1/2	3 1/2	3 1/2	1 0	—	0 50	Transvaal	4, Sun Court, E.C.
Orange F.S.E.	2 1/2	3 1/2	2 1/2	1 0	1/- Sept. '94	1 0 0	Orange F. State	10, Moorgate-street.
Orion	2 1/2	3 1/2	2 1/2	1 0	10% Nov. '94	1 0 0	Witwatersd.	110, Basinghall-street
Otto's Kopje	2 1/2	3 1/2	2 1/2	1 0	—	0 19 3	Kimberley	117, Cannon-st., E.C.
Paarl Central	23 1/2	24 1/2	23 1/2	1 0	—	1 0 0	Transvaal	120, Bishopsgate-st. Wn
Paarl Ophir	—	—	—	10 p.c. Aug. '94	1 0 0	12,000	Twefontein	Cape Town.
Pardys's Mozamb. G	3 1/2	3 1/2	3 1/2	1 0	10 p.c. Apr. '94	0 100	S. E. Africa	Broad St. Avenue.
Pigg's Peak, New G	5 1/2	6 1/2	5 1/2	1 0	—	0 17 0	Swaziland	6, Queen-street-place
Potchefstroom	1 1/2	1 1/2	1 1/2	1 0	—	1 0 0	Potchefstroom	19, Rury-st., E.C.
Princes Estate G	1 1/2	1 1/2	1 1/2	1 0	—	1 0 0	Witwatersd.	33, Cornhill, E.C.
Randfontein	14 1/2	15 1/2	13 1/2	1 0	—	1 0 0	Witwatersd.	59, Holborn Viaduct.
Rand Mines	15 1/2	18 1/2	15 1/2	1 0	—	1 0 0	Witwatersd.	120, Bishopsgate-st. Wn
Reed's Drift	16 1/2	18 1/2	16 1/2	1 0	—	5 0 0	Transvaal	19, Finsbury circus.
Rhinos	7 1/2	7 1/2	7 1/2	5 0	5% Aug. '94	5 0 0	Transvaal	55, Holborn Viaduct, I
Roodepoort Un. G	3 1/2	3 1/2	3 1/2	1 0	10 p.c. Aug. '94	1 0 0	Witwatersd.	Warnford-court, I
Sheba	27/-	28/-	27 1/2	1 0	1/- Sept. '94	1 0 0	Lydenburg	85, Gracechurch-st.
Slati	2 1/2	3 1/2	2 1/2	1 0	—	0 17 6	Zoutpansberg	4, Sun Court, E.C.
Slimmer & Jack...G	8 1/2	8 1/2	8 1/2	1 0	10% May '94	1 0 0	Witwatersd.	33, Cornhill.
Do New	—	—	—	6 0	—	6 0 0	Witwatersd.	33, Cornhill.
S.A. Gold Trust ...	1 1/2	1 1/2	1 1/2	1 0	15% Nov. '94	1 0 0	South Africa.	8, Old Jewry.
Spitzkop (New) G	7 1/2	8 1/2	11 1/2	1 0	—	0 19 8	Lydenburg	15, Bishopsgate-st. Wt.
Stanhope	2 1/2	2 1/2	2	1 0	50% Sept. '94	—	Witwatersd.	1, Crosby Square, I
Sutherland R. ...G	14/-	15/-	13 1/2	1 0	—	0 18 6	Zoutpansberg	5, Budge-row, E.C.
Tautonia	12/-	13/-	12/-	1 0	—	0 40	Witwatersd.	8, Old Jewry.
Thistle Reef	-16	-14/-	-16	0 5	—	1 0 0	Barberton	15, Angel-court, E.C.
Trans. Coal Trust ..	13 1/2	14/-	13 1/2	1 0	1/- Sept. '94	1 0 0	Witwatersd.	Broad-t. House, E.C.
Trans. Est. & Dev.	9 1/2	10 1/2	9 1/2	1 0	—	0 286 70	Transvaal	76, Old Broad-st. E.C.
Trans. Lnd.	2 1/2	3 1/2	2 1/2	1 0	1/- June '94	1 0 0	Transvaal	Suffolk House, E.C.
Trans. Lnd.	5 1/2	6 1/2	5 1/2	1 0	—	0 19 1/2	Transvaal	Suffolk House, E.C.
Trans. Lnd.	1 1/2	2 1/2	1 1/2	1 0	—	0 15 6	Transvaal	33, Cornhill.
Transvaal	—	—	—	7 1/2	May '94	1 0 0	Witwatersd.	Johannesburg.
Turffontein Est. ...	—	—	—	2 1/2	Jan. '94	1 0 0	So. Africa	120, Winchester Ho.
Un. Ivy Reef	15/-	17 1/2	15/-	1 0	2 1/2 Jan. '94	1 0 0	Transvaal	110, Cannon-street
Un. Langlaagte (N)G	1 1/2	1 1/2	10/-	1 0	—	1 0 0	Witwatersd.	23, St. Swithin's-lane.
Van Ryn	2 1/2	2 1/2	2 1/2	1 0	—	1 0 0	Witwatersd.	1, Crosby-square, I
Victory Hill	2 1/2	2 1/2	2 1/2	1 0	—	1 0 0	De Kaap	Portland House, E.C.
Village Main Reef	4 1/2	4 1/2	4 1/2	1 0	—	1 0 0	Witwatersd.	8, Old Jewry.
Wassau	—	—	—	1 0	—	1 0 0	Gold Coast	147, Cannon-street.
Wemmer	4 1/2	5	4 1/2	1 0	10% Nov. '91	1 0 0	Witwatersd.	19, Rury-street, I
Witwatersrand G	38/-	39/-	31 1/2	1 0	—	0 250,000	Witwatersd.	Warnford-court, I
Woluter	3 1/2	3 1/2	3 1/2	1 0	—	1 0 0	Witwatersd.	Warnford-court, I
Wolverdam	3 1/2	3 1/2	3 1/2	1 0	2/- Apr. '94	1 0 0	Transvaal	5, Co. thall-buildings
Wolterdam	3 1/2	3 1/2	3 1/2	1 0	—	0 18 0	Transvaal	5, Copthall-buildings
Worcester	3 1/2	3 1/2	3 1/2	1 0	10% Oct. '94	1 0 0	Witwatersd.	8, Old Jewry, I
Zambesia Explora.	2 1/2	2 1/2	2 1/2	1 0	—	1 0 0	Transvaal	13, George-st., E.C.

REPORTS FROM THE MINES.

BRITISH MINES.

CARN BREA.—October 26: Highburrow west. The lode in the 298 end driving east of rise on south part of lode is worth £12 per fathom. We are putting up a rise in the back of the 298 fathom level west for the advantage of working the western section of stopping ground. Lode worth £30 per fathom.—Highburrow east. Harvey's engine is sunk 12½ fathoms below the 322 fathom level, and next week we shall commence driving a crosscut south to the lode. This is an important point, being under and south of the elvan, and from the character of the ground we have in the shaft, we consider the prospects very encouraging. The lode in the 310 end east of shaft is worth £15 per fathom. The lode in the rise in back of this level is worth £15 per fathom. We only started this rise on Monday, the 15th inst., by boring machine, and we are already up 6 fathoms; with this speed of driving we shall soon communicate with the 286 fathom level. The lode in the 286 end east is worth £12 per fathom.—Old sump. We cannot speak of any particular change in this part of the mine since last committee meeting. We are pushing on the sinking of the engine shaft for the junction of Teague's and Druid lodes, which should take place within a short distance further sinking. The lode in the 256 end east on Druid lode is worth £10 per fathom; in the 244 end east £11 per fathom. Since our last committee meeting we have communicated these two levels by a rise from the 256 fathom level. We are pleased to report a satisfactory month's work with our boring machines, and in our other developing points.—(Signed) W. T. White, John Daddow, Wm. Thomas, John Penhall.

DEVON GREAT CONSOLS.—November 1: Monthly report:—Wheal Anna Maria.—In the stope in the bottom of the 110 fathom level east the lode is turning out well and is yielding 16 tons of good mundaic ore per fathom. In the stope in the back of the 110 fathom level east the lode is also looking well, and is turning out 8 tons of copper ore and 6 tons of mundaic per fathom.—Field shaft, south lode. In the stope in the bottom of the 130 fathom level west the lode will yield 10 tons of good mundaic ore per fathom. In the stope in the back of the 130 fathom level east the lode will produce 8 tons of mundaic ore per fathom.—Richard's shaft, Wheal Josiah. The stope in the bottom of the 115 fathom level east will yield 8 tons of mundaic ore per fathom.—Agnes shaft. In the stope in the back and bottom of the 103 fathom level west, the lode is worth 2 tons of copper ore and 2 tons of mundaic per fathom.—Wheal Emma. Thomas' shaft. The stope in the bottom of the 100 fathom level east is yielding 2 tons of copper ore, and 10 tons of mundaic per fathom. In the stope in the bottom of the 100 fathom level east No. 2, there is a good lode worth 2 tons of copper ore and 13 tons of mundaic per fathom. The stope in the back of the 100 fathom level east will produce 1 ton of copper ore and 8 tons of mundaic per fathom.—Inclined shaft. The stope in the back of the 150 fathom level east is worth 2 tons of copper ore, and 5 tons of mundaic per fathom. In the stope in the back of the 150 fathom level east No. 2, the lode will produce 1 ton of copper ore and 4 tons of mundaic per fathom.—The stope in the back of the 112 fathom level west is yielding 6 tons of mundaic per fathom. The stope in the bottom of the 100 fathom level west will produce 1 ton of copper ore and 5 tons of mundaic per fathom.—New shaft, new south lode. The stope in the bottom of the 190 fathom level east and west is yielding 2 tons of copper ore and 6 tons of mundaic per fathom. The stope in the back of the 130 fathom level east is producing 1 ton of copper ore and 3 tons of mundaic per fathom.—Watson's engine shaft. In the 172 fathom level east the lode is 4 feet wide, producing 1 ton of copper and mundaic per fathom. In the rise in the back of the 172 fathom level east the lode is promising improvement, and contains a little ore. In Harvey's winze the lode is looking better, and is yielding 4 tons of copper and mundaic ores per fathom. In the 148 fathom level east the lode is 4 feet wide, producing 1 ton of copper and mundaic ores per fathom. The stope in the back of the 172 fathom level east is producing 5 tons of copper and mundaic ores per fathom. The stope in the back of the 160 fathom level east is yielding 6 tons of copper and mundaic ores per fathom. In the stope in the back of the 160 fathom level west the lode will yield 6 tons of copper and mundaic ores per fathom. The stope in the back of the 160 fathom level west is worth 4 tons of copper and mundaic ores per fathom.—William Clemo.

GREEN HURTH.—October 26: Ore in stock September 28, 97 tons 18 cwt.; ore raised for month, 18 tons; total, 115 tons 18 cwt.—Annie's Vein: During the past week this end has been extended southward 1 fathom. At the fore part of the week the vein improved for lead, but has again diminished in value, worth at present 15 cwt. per fathom. The heading in the back of the above level remains as last reported, worth 1 ton per fathom.—South-West Branch Vein. The underhand stope northward maintains its value, worth 2½ tons per fathom. Not much has been done in this working this week, the men being engaged sumping at the forehead, to meet the rise coming up, from the lower workings. These levels have now been communicated with, thereby improving the ventilation here. The driving south has been resumed, and have driven 1 fathom on the vein. This shows a slight improvement for lead, worth 12 cwt. per fathom. I have commenced to crosscut at 30 fathom level to prove the south branch vein in the limestone. The intermediate vein, which is being worked by two men, is worth for lead 1 ton per fathom.

LEADHILLS.—W. H. Pauli, October 30: Brown's vein. The 160 fathom level is set to drive south of Wilson's shaft by six men at 80s. per fathom, vein here steadily improving and in forebreast is strongly mixed with quartz, spar, and lead ore worth 25 cwt. per fathom, now extended 8 fathoms 1 foot south of said shaft; the same level north of Jeffrey's shaft set to seven men at 82s. 6d. per fathom is advanced 34 fathoms, vein over 4 feet wide, containing spar and good patches of lead ore, and will yield 15 cwt. per fathom; the winze below the 145 south of Wilson's shaft is now down 11 fathoms 0 feet 6 inches, set to six men at 85s. per fathom, vein 4 feet wide, showing a good mixture of spar, &c., but without ore to value; No. 2 stope over the 145 north of Jeffrey's shaft set to four men at 27s. 6d. per fathom is in a vein yielding 30 cwt. of ore per fathom. No. 3 stope over same level north of Jeffrey's shaft set to two men at 37s. 6d. per fathom will produce 30 cwt. of ore per fathom. No. 4 stope over ditto north of ditto set to four men at 35s. per fathom, is on vein 4 feet wide, worth 25 cwt. of ore per fathom. The 115 fathom level is now driven 130½ fathoms north of Jeffrey's shaft, set to three men at 85s. per fathom. Vein here 4 feet wide, showing a little quartz spotted with lead ore, and forebreast damp, but stone rather dark in character. No. 1 stope over this level north of Jeffrey's shaft is worth 20 cwt. of ore per fathom, set to two men at 37s. 6d. per fathom. The 100 fathom level is extended 165 fathoms 5 feet south of Wilson's shaft, vein 4 feet wide, composed chiefly of stone and spar, with a little water issuing from forebreast. Set to four men at 67s. 6d. per fathom. The crosscut east at the 100 fathom level south of Wilson's shaft, is now advanced 29 fathoms 1 foot 3 inches towards Raik vein, ground of a congenial character, set to seven men at 120s. per fathom. A drift is set to two men at 65s. per fathom from No. 1 stope over the 100 fathom level, south of Wilson's shaft, on branch of vein, worth 25 cwt. of ore per fathom. No. 2 stope over drift above the 100, south of Wilson's shaft, set to four men, at 32s. 6d. per fathom, will produce 25 cwt. of ore per fathom. The 55 fathom level, south of Wilson's shaft, is driven 135 fathoms 5 feet, vein 4 feet wide, chiefly of stone, with a little spar, set to four men at 67s. 6d. per fathom. No. 1 stope over this level south of Wilson's shaft is worth 40 cwt. of ore per fathom, set to four men at 35s. per fathom. The stope below the 70 fathom level, south of Wilson's shaft, is suspended, vein having become poor. The stope over the 50 south of flat rod shaft set to four men at 30s. per fathom will yield 45 cwt. of ore per fathom. A stope over the 35 south of flat rod shaft

by four men at 35s. per fathom is worth 30 cwt. of ore per fathom. A stope below same level south of said shaft set to four men at 37s. 6d. per fathom will produce 50 cwt. of ore per fathom.—Saw-rope vein. Gripp's adit south of George's Roubt vein is extended 81 fathoms 4 feet 6 inches; vein here 3 feet wide, strongly mixed with kindly spar and barytes, and showing spots of lead ore occasionally; set to three men at 80s. per fathom.

SOUTH CONDURROW.—October 31: The lode in the 163 crosscut north is fairly cut through and is 8 feet wide; a strong and kindly lode, yielding tinstone that will pay to stamp, and is letting out much water. We intend to set the men to rise in a few days towards the bottom of the 153. A communication between the 163 and the 153 will give good ventilation and open out the lode for stopping. We expect shortly to intersect the lode in the bottom of Marshall's shaft. The 153 and west is without material alteration. The stope in the back of this level is worth £10 per fathom.—(Signed) Wm. Rich, Wm. Thomas, Fred. Rich.

SOUTH FRANCES UNITED.—October 30: Setting report. To rise against Dauboz's shaft above the 246 fathom level west of Pascoe's by six men and three boys with a boring machine at £8 per fathom, lode worth £9 per fathom. A rise above the 246 west of cross course by six men and three boys with a boring machine, at £7 per fathom, lode worth £20 per fathom. Stope in back of this level west of rise is worth £18 per fathom. Stopping by 18 men at 4s. 9d. per ton. Stope in back of the 144 fathom level west of Grenville's is worth £10 per fathom, stopping by 6 men at 3s. 9d. per ton. Stope in back of the 134 fathom level west of Grenville's is worth £10 per fathom, stopping by 9 men at 5s. per ton. The 124 fathom level to drive west of Grenville's by 4 men at £10 per fathom, lode worth £13 per fathom. No. 1 stope in bottom of this level is worth £13 per fathom, stopping by 9 men at 6s. per ton. No. 2 stope in bottom of this level is worth £11 per fathom, stopping by 6 men at 4s. 6d. per ton. Rise in back of this level by 4 men at £10 10s. per fathom, lode worth £11 per fathom. Stope in back of this level is worth £10 per fathom. Stopping by four men at 5s. per ton. The 114 fathom level to drive west of Grenville's by four men at £7 10s. per fathom, lode producing low quality tin stuff. Dauboz's shaft to sink below the 140 fathom level to be carried 14 feet long and 7 feet wide, by 18 men at £30 per fathom. In our tribute department we have 57 pitches working by 154 men, on tributes varying from 9s. 6d. to 13s. 4d. in the £, the standard for tin being £42 per ton.—William Hooper, John Opie, Richard Williams, W. Hy. Richards.

COLONIAL, INDIAN, AND FOREIGN MINES.

DE LAMAR.—Copy of Captain J. W. Plummer's monthly report for September:—Mining. Ore breaking department. 77 feet vein above the 7th level. Average width of vein 4 feet 6 inches, assaying £17 36 in gold and \$9 92 in silver, equals £27 28 per ton.—77 feet vein above the 8th level west. Average width of vein 6 feet 4 inches, assaying \$24 in gold and \$2 50 in silver, equals £26 50 per ton.—77 feet vein above the 9th level west intermediate. Average width of vein 4 feet 3 inches, assaying £17 12 in gold and \$5 in silver, equals £22 12 per ton.—77 feet vein above the 9th level east intermediate. Average width of vein 9 feet, assaying £18 in gold and \$9 85 in silver, equals £27 85 per ton.—77 feet vein above the 9th level extreme east stope. Average width of vein 3 feet 3 inches, assaying £2 50 in gold and \$21 50 in silver, equals £24 per ton.—No. 5 vein above the 6th level. Average width of vein 3 feet 3 inches, assaying £18 50 in gold and \$2 80 in silver, equals £21 30 per ton.—No. 5 vein above the 8th level. Average width of vein 6 feet 6 inches, assaying £37 90 in gold, and \$2 80 in silver, equals £40 70 per ton.—No. 5 vein about the 9th level. Average width of vein 4 feet, assaying £25 in gold, and \$4 80 in silver, equals £29 80 per ton.—No. 6 vein above the 9th level. Average width of vein 3 feet, assaying £25 30 in gold, and \$7 70 in silver, equals £33 per ton.—No. 6 vein above the 7th level. Average width of vein 4 feet 9 inches, assaying £16 in gold, and \$2 in silver, equals £18 per ton.—No. 7 vein above the 8th level. Average width of vein 3 feet, assaying £32 in gold, and \$1 in silver, equals £33 per ton. The stope is idle at present.—No. 8 vein above the 8th level. Average width of vein 1 foot 4 inches, assaying £13 50 and \$1 50 in silver, equals £15 per ton.—No. 9 vein above the 7th level. Average width of vein 4 feet 3 inches, assaying £20 in gold and \$5 in silver, equals £25 per ton.—No. 9 vein above the 8th level. Average width of vein 7 feet, assaying £24 in gold and \$4 in silver, equals £28 per ton.—No. 9 vein above the 9th level. Average width of vein 3 feet 4 inches, assaying £42 in gold and \$9 in silver, equals £51 per ton.—Prospecting department. Hamilton winze below 2nd level. The present depth of this winze is 51 feet, average width of vein 4 feet, assaying £18 50 in gold and \$2 50 in silver, equals £21 per ton. At present the winze is suspended, and a raise is being carried up from the back of the 3rd level to intersect it. 77 feet vein 9th level, hanging wall branch. Reported length 192 feet, advanced for September 35 feet; total length from No. 2 crosscut 227 feet. Average width of vein 1 foot 6 inches, assaying £12 75 in gold and \$13 in silver, equals £25 75 per ton.—77 feet vein above the 9th level (intermediate east). Reported length 21 feet, advanced September 34 feet; total length 55 feet. Average width of vein 12 feet, assaying £25 in gold and \$8 in silver, equals £33 per ton.—No. 5 vein 10th level east. Reported length 164 feet, advanced for September 20 feet; total length 184 feet. Average width of vein, 2 feet 6 inches; average value is low. No. 5 vein, 10th level, raise above level. Reported height 18 feet, advanced for September 43 feet, total height 61 feet; this brings it up to the 9th level east; the vein passed through for the month averaged 2 feet 3 inches in width, assaying £12 50 in gold and \$8 in silver, equals £20 50 per ton.—No. 7 vein, 7th level west. Reported length 174 feet, advanced for September 31 feet, total length 205 feet, average width of vein 6 feet, assaying £17 in gold and \$5 in silver, equals £22 per ton.—No. 7 vein, 8th level, west. Reported length 75 feet, advanced for the month 30 feet, total length 105 feet; during the past two weeks the value of the vein has fallen off and the present face of the level is in poor ore; the average width of the vein for September was 2 feet 6 inches, assaying £26 50 in gold and \$1 in silver, equals £27 50 per ton.—No. 8 vein, 8th level, west.—A limited amount of work has been done at this point; the vein is narrow, but fairly good.—No. 9 vein, 7th level, west. Reported length 294 feet, advanced for the month 26 feet, total length 320 feet, average width of vein 1 foot 9 inches, assaying £14 in gold and \$2 in silver, equals £16 per ton.—No. 9 vein, 8th level west. Reported length 443 feet 3 inches, advanced for the month 15 feet, total length 458 feet 3 inches. The vein displayed varying widths and values. Its average for the 15 feet were—width 4 feet, assay value £20 per ton, nearly all gold. Its present face is in low grade ore.—No. 9 vein, 9th level west. Reported length 283 feet 9 inches. It has been suspended for some time past. The crosscut driven from this vein in search of the foot-wall section, has entered the latter. The branch is of fair size, but of low value.—No. 9 vein, 10th west, raise above level. The raise from the back of this level has reached the 9th level, a total height of 61 feet. The grade of the ore passed through by the raise was variable in quality, showing zones of milling ore and second class alternating.—Anchor vein and surroundings. Work on the Anchor vein has progressed steadily. The average width of the vein has been 2 feet, and average value \$15, chiefly gold. The exploratory crosscuts (referred to in the last monthly report) and their ramifications have been prosecuted steadily and with gratifying results. Another section of the 77 feet vein has been uncovered. The vein is 9 feet wide, assaying £32 in gold, with a trace of silver. This may be considered the third ore-shoot on this vein. There is a large area of unexplored ground surrounding this late discovery, and doubtless large amounts of ore will be produced.—Summercamp Group. The operations for the month have been confined to the extension of the main cross-cut, and the development of No. 1 and No. 3 veins; there are no changes of importance to report; the ore bodies appear to be short, but of fair quality. They may, however, be numerous, which will compensate for their limited length at this level; it is very probable that the next level will show up the ore bodies in greater lengths, the present levels being near the surface; the crosscut is in rock very favourable to

the existence of ore.—Milling department. The milling department has been running with its usual regularity, the only material stoppage being 12 hours for the clean up on September 1.—Table of work performed for September, 1894: Number of wet tons crushed, 4,282 09; number of dry tons crushed, 3,853 98; assay value of the pulp, \$26 91; gold, \$20 91; silver, \$6; assay value of the tailings, \$5 28; gold, \$4 52; silver, .76; percentage saved, total, 80 38 per cent.; number of Doré bars produced, 26; number of ounces pure gold produced, 2,875 305; number of ounces fine silver produced, 35,973 49; value of gold produced, \$57,506 10; value of silver produced, \$21,584 09; equals, \$79,090 19. Ore shipped during the month, \$3000; miscellaneous revenue, \$1143 51; equals, \$39,233 70; deduct all expenses for the month, \$39,809 93; estimated profit for month (or at \$4 90 to £ sterling, £8860), \$43,423 77. The new hotel is approaching its completion. It will be a very commodious building, and well and economically arranged. The piping for the balance of the Louise ditch has arrived, as well as the little Pelton wheel, and are in process of installation. The contractors for the delivery of cordwood and mining timbers will have finished their contracts, with one exception, by the end of the present month. In the mill we are placing a new Baranganath steam heater, to be used in connection with the Corliss engine, the old heater having given out. Everything around and about the property is in good order and working smoothly.

DON PEDRO.—Maquiné Mine monthly report for September: The work done throughout the month on gold raising has been carried on at the 50 fathom level east, also north of the 50 on a very productive lode. An incline rise has also been started from the 60 north on the lode. This also is of good quality, and although plans of operations have been very limited owing to the small force available for this work, the gold returns are satisfactory. In the coming month we hope to resume the 60 east, also a new drive will be started to be driven south, to meet with the southern boundary. We shall also resume the 60 north to prove the lode here.—The driving north from 50 crosscut. On the 14th we found by samples taken that we had cut into a line of gold of very fair quality of boxwork. The line of gold is well defined and of a good size. We have now cut across it, and have extracted 21 boxes since first discovered.—Rise from 60 north. This has been started on the course of the lode, which being the same body of mineral as we have at the 50 north, our intention is to continue this up to the 50 north, which, when accomplished, will open out a large section of stopping ground of good quality judging from the samples taken from the rise mentioned. Progress may be a little slow in rising owing to the ground being wet, so that great care has to be taken in the excavation. Risen for the month 2 fathoms.—60 north drive. This will be resumed at once, and will be continued in a more northerly direction on the shoot of the lode, where we expect good results.—Shaft sinking. I am pleased to say that the sinking of this has been carried on very satisfactorily considering, as mentioned in mine report for August, the big excavation. This shaft is now sunk 18 feet below the 60, and made secure.—Reduction. This has been kept in good working order, various repairs throughout the month having been done. We have also tried an experiment to prove whether amalgamation would answer, putting down a copper plate dressed by the reduction officer in front of the stamps. We then made a run of a week, and found it to answer remarkably well. We shall as early as possible proceed with this process, which will save a great amount of labour in cleaning the gold.—New adit. Distance driven for the month 13 fathoms 5 feet, total distance remaining to be driven, 18 fathoms.—Morro de Santa Anna. The lode driven on from Bawden's shoot is opening up very satisfactorily.

PAHANG CORPORATION.—Mining report for the month of July: I beg to submit to you progress report for the month of July.—Pollock's. The vertical shaft was sunk an additional 4 feet in the early part of the month, which makes the total depth from surface 249 feet. After putting the necessary heavy frames in the lower part of the shaft to carry the pump bearers, the draw lift above No. 1 level was taken out and the plunger lift placed in position from the bottom of the shaft up to No. 1, and the Nos. 2 and 3 crosscuts were started at the end of the month. Progress in the No. 3 crosscut will be rather slow for a week or two on account of having to carry it in for a few feet at a width of 12 feet, so as to have plenty of room by and by to cut out a water lodgment under the floor of the level, when all the water that is making between this level and the surface can be run into the water lodgment to which the suction pipe of the plunger lift can be connected, so that the water from above will not retard the future sinking of the shaft in any way. Since getting the pump to work from the bottom of shaft we find it a great relief to the small engine, and we are only using about half the quantity of firewood that we have been using hitherto.—No. 1 below adit. The winze in west-end of drive from bottom of O'winze has been sunk a further 33 feet; total below level 48 feet. We are carrying down a very promising looking lode, although it is only about 18 inches wide, and it carries a little tin stone. As the water is not very heavy as yet I think it is advisable to keep pushing it down, and should we not get beat out with water we may be able to get it deep enough to connect with No. 2, when it is driven far enough. I intend shortly to start another winze down towards No. 2 level at the eastern end of ore shoot. The ore coming to hand from the four sections of stopes over No. 1 level is still of very fair quality.—Jeram Batang. No. 1 above adit west has been advanced a further 36 feet, total from crosscut 157 feet. The lode in the end is 2 feet wide, and looks promising. It is carrying a little tin, but not enough to call it payable.—(Signed) William Straughan.

EAGLEHAWK CONSOLIDATED.—The following fortnightly report has been received from the mine, dated Maldon, September 15: In the early part of the fortnight we stopped the pumping in the Alliance shaft, and we removed all the air pipes and connected same in the Limited shaft. We put the pipes down the Limited shaft to convey the water from the 626 feet level into the well at the bottom of that shaft. During the fortnight the contractors have driven the crosscut west 28 feet, making the crosscut 122 feet from the shaft. The ground in the crosscut is hard, dry blue stone; we have seen but very little quartz in the crosscut since we passed the leaders further back. The brick dam was finished on 5th inst., and the brickwork is nearly dry. I found a little water coming out of the ground 50 feet away, and it will, I think, grow as the pressure increases. The tributers (Smith and party) have had a crushing of 18 tons, which went very well—59 ounces of smelted gold. Harris and party had a crushing at the battery of 27 tons which we think is payable.

MOUNT ZEEHAN (Tasmania).—Manager reports for week ended September 18: Argent section. Main engine shaft, No. 4 lode, 72 feet level south extended 12 feet 9 inches, total from crosscut 31 feet 3 inches. There is no improvement. We are in the midst of a series of lodes and branches which have disturbed the country, and have suspended drive for the present.—No. 6 lode, 132 feet level north. Am driving on a branch going off in the hanging wall, which has every appearance of being the main lode. Lode 1 foot 6 inches wide of fairly good second. Sunk No. 1 winze 3 feet 6 inches, total 6 feet 6 inches. A little galena is showing, but not payable.—West crosscut. Drive south on branch extended 5 feet 6 inches, total 12 feet 6 inches. Lode 5 inches wide, with good hanging wall, but not at present payable.—No. 7 lode. Sunk winze 7 feet, total from surface 43 feet. Lode 4 inches wide and poor. Concentrator has been run 58 hours, and milled 219 tons second, 122 of which were from this company's old workings on Montana section, producing 23 tons 3 cwt. concentrates, containing about 17 tons 9 cwt. lead, and 2283 ounces of silver.

VICTORIA AND ALTAMIRA.—The following has been received from Mr. Santelli:—Edward's Drive. Crosscut timbered and complete this week, and I hope by the week's end to be extracting quartz.—New crosscut Santelli. I am continuing this crosscut. I have already struck three quartz leaders.—Victoria shaft. This shaft is now 31 feet deep. We are at the wall of the lode, a little to the right of the Victoria creek. I advise that we stop to surface so that as there are only 31 feet we shall then have an open quarry right opposite this shaft on the underlie of the lode, and thus ensure a regular supply of quartz.

AFRICAN CONSOLIDATED LAND AND TRADING.—The manager reports:—The work at the mine has been progressing favourably during the week. The shaft has been sunk further 6 feet, and the drive has also been advanced 6 feet. The quality of the coal keeps about the same.—Railway. This is approaching completion, but, I am afraid, will be some time before it is finished. Trains run through to Pretoria, but not yet officially.—Trees. It is far more important to plant trees in this district than round Johannesburg. The coal properties in this country are worked very extravagantly where there is no timber for props. In coal mining more material is brought to the surface than in gold mining, and larger works go on underground. You will, therefore, see the necessity of turning your attention to this. There is not a tree for miles, and no plantation whatever. I am planting already. Independently of the coal, this industry will pay well, and but four or five years will elapse before there is a revenue. At Johannesburg I hear each prop costs 3s. each, and a tree will cut into many props; but other timber is required, and very largely, too. The cheapest way is to plant seeds yearly. There is no end of land, and it is well adapted for the purpose; in fact, this is a splendid property all round, and I am certain only a short time will elapse before you hear a great deal of this district. Everything moves quickly here when it does start, and people seem only to have been waiting for the railway. In their circular to the shareholders the directors remark: "The board learns that there is some probability of Delagoa Bay being made a coaling station for the French navy, and should this resolve itself into fact it must tell considerably upon the fortunes of all coal properties upon that line of railway. Mr. Webb, the gentleman recently sent out by the board to the company's property, has now arrived in South Africa."

ALAMILLOS.—Mine report, dated October 24: In the 85 fathom level, driving west of Taylor's engine shaft, the lode is small and unproductive. The lode in the 160, west of the same shaft fell off in value during the past week. The 100 west of Judd's engine shaft has been suspended, it having gone beyond the ore ground above. There is no improvement to report in the 100 east of that shaft. Carrillo's winze, sinking below the 145 fathom level, the lode is producing good stones of lead, and is valued at $\frac{1}{2}$ ton per fathom.

BRITISH BROKEN HILL PROPRIETARY.—Mining manager's report for the week ending September 19: Blackwood's (No. 1) Shaft, 400 feet level. North drive is driven 3 feet, face in hard quartz with a little sulphides. Nothing has been done in south drive during week as men have been employed at 150 feet platform. However, work will start again in this drive to-morrow.—150 feet level. Are still cutting out flat on the eastern side of this shaft, which will be completed in a few days, will then commence cross cutting eastwards.—Howell (No. 2) shaft, 300 feet level. North east drive has been lengthened 5 feet, total length 27 feet, face in hard low grade sulphides mixed with quartz.—200 feet level. All work has been stopped on 10th floor of far north stope until the east cross cut is in from 150 feet level of Blackwood's (No. 1) shaft.—Marsh's (No. 1) shaft, 2nd level. Uprise over north drive is risen 1 foot, total height 12 feet, roof rather patchy. This has been stopped for the present. South drive off No. 3 east cross cut is driven 16 feet, total length 47 feet, face still in lode, material of no value. The No. 2 uprise over No. 4 east cross cut is risen 5 feet, total height 13 feet. Have broken 11 tons of ore, averaging 23 per cent. lead and 28 ounces silver per ton.—Stopes. We are stopping both north and south from a point 35 feet down the winze sunk in north drive. From south stope we have broken and hoisted 14 tons ore averaging 35 per cent. lead and 89 ounces, and 4 tons assaying 19 per cent. lead and 37 ounces silver per ton; from north stope 1 ton assaying 35 per cent. lead and 47 ounces and 3 tons averaging 19 per cent. lead and 24 ounces silver per ton.—Stopes down winze. Have broken from the north stope 1 ton assaying 36 per cent. lead and 43 ounces and 6 tons averaging 19 per cent. lead and 37 ounces; from the south stope 2 tons assaying 19 per cent. lead and 44 ounces, and 8 tons averaging 19 per cent. lead and 37 ounces silver per ton.—Retailik's winze. North drive off this winze is driven 9 feet, total length 19 feet, face in fair grade carbonate ore. We broke from this drive 1 ton assaying 19 per cent. lead and 37 ounces, and 24 tons averaging 28 per cent. lead and 18 ounces silver per ton. South drive started off winze at same point is extended 10 feet through carbonate ore. Have broken and hoisted 16 tons, assaying 27 per cent. lead and 32 ounces silver per ton. The week's assays vary from 3 to 43 per cent. lead and from 2 to 276 ounces silver per ton.

BRILLIANT BLOCK.—Mine manager's report fortnight ending August 22: Underlie shaft deepened 6 feet, total from No. 6 plat 31 feet. Reef 2½ feet of 15 dwts. stone. No. 6 level west extended 24 feet, total from shaft 59 feet. Reef in face 1 foot thick of 15 to 17 dwts. stone. No. 6 level east extended 20 feet, total from shaft 64 feet. Reef 4 feet thick of 17 dwts. stone. The reef in the stope is 4 feet thick with 16 to 18 dwts. per ton. No. 5 level west extended 15 feet, total from shaft 278 feet. Reef in face is 1 foot thick of 10 dwts. stone. No. 5 level east extended 22 feet, total from shaft 347 feet. Reef 3½ feet thick of 1 ounce stone. Stopping on a reef from 1 to 6 feet thick of 16 dwts. stone. The hanging wall drive on 5 level east extended 9 feet from starting point.—No. 4 level west. We are stopping over this level on a reef 2 feet thick of 10 to 12 dwts. stone. No. 2 winze from No. 4 level west sunk 19 feet and holed on No. 5 level, total depth 75 feet. It has carried reef all the way down 18 to 20 inches thick of 10 to 12 dwts. stone.—No. 4 level east. We are stopping on the hanging wall drive on a reef 1 foot thick of 25 dwts. stone, and over footwall drive on a reef 2 feet thick of 18 to 20 dwts. stone. Stone raised 950 tons. Stone crashed 1157 tons for 1004 ounces 1 dwt. of gold. The new boiler has arrived at the mine and will shortly be placed in position.

BAYLEY'S REWARD CLAIM.—Coolgardie, W.A., September 8: Sylvester shaft during the week has been sunk 5 feet, total now being 280 feet from brace. Lode still continues as usual.—West cross cut (Gorrie's). West cross cut for Gorrie's lode has been extended 7 feet, full length being 180 feet from shaft. The same quartzite mixed with small veins of quartz still continue.—No. 2 intermediate. The No. 2 intermediate has been advanced 6 feet, total 37 feet. No change to report. Intend suspending the driving for some little time and start rising from the back of the drive towards the 100 feet south drive.—No. 1 intermediate. In No. 1 intermediate are still rising from the back of the drive carrying portion of ground about 20 feet long more in the form of stope. The lode is about 8 feet wide in places showing gold freely, not quite so good as last week, but doubtless will again shortly improve.—100 feet stope. The work here has been continued at times exposing good stone, but the rich vein not quite so regular this week as it was near Gordon shaft.—50 feet drive north (Gordon shaft). This has been driven 3 feet, full length 59 feet. Have discontinued this for a short time and commenced sinking a small winze from there to connect with the rise in the No. 1 intermediate. Winze 50 feet level north has been started during the week and sunk 6 feet. Have seen small patches of ironstone containing gold.—Air shaft north of Gordon's. The air shaft being sunk north of Gordon's since commenced has been sunk 13 feet from surface. Have seen a little fine gold which I should estimate to be fair battery stone.—Everard shaft. The north drive has been extended 6 feet, total 91 feet. Have now started to cut across to the footwall side of lode to ascertain if any change, and when completed will resume driving.—South drive. The south drive has also been driven 3 feet, full length 133 feet. This has now been suspended for the time being, as it is better to work this portion of the ground from the north drive in Cockshot shaft.—Cockshot shaft. In the north drive there has been a considerable amount of timbering done, and the lode being very wide (from 8 to 10 feet) we cannot make much or rapid progress. From the appearance of the stone, I am in hopes a change will shortly take place.—Stopes. Everard shaft. The stope in Everard shaft have during the week yielded some very coarse heavy gold, and the stone raised therefrom should yield fairly well.—Machinery. The completion of the second 10 stampers is being continued as rapidly as possible.—Stone crushed. Stone crushed for the week has been 74 tons, 7 cwt. being from the strong room.—Yield. On the 7th inst. dispatched by escort 1400 ounces bar gold, as telegraphed to you on the same day.

CALIFORNIA MILLING AND MINING.—The following is the manager's report on the mill and mine for the month of September:

Mill. Custom ore treated, 1571 tons; California ore, 93 tons; total 1664 tons, with an average of 60 stamps at work. Custom ore is still too scarce for us to reef the entire mill running.—Mine. There has been an important improvement in the 300 level east on the Governor Adams vein, where there is now a good 6 inch leader of blende and copper pyrites, yielding nearly 2 tons of smelting ore per fathom. This is as yet very low grade, assaying 2 ounces of gold per ton, but it may improve on further drifting. Total receipts for the month, \$3873.33; total expenses (exclusive of \$400 paid on account of rebuilding of mill), \$3234.42; profit for month, \$638.91.

CHAMPION REEF.—Fortnightly report of Captain James Lowe, superintendent, dated October 8: Dalyell's shaft. Rise in back of 685 feet level south of shaft to communicate with winze risen 2 feet, total height 20 feet 3 inches, no sample taken.—Garland's shaft. This has been sunk 16 feet, total depth 781 feet; lode smaller, is now 1½ feet wide, assaying 2 ounces 12 dwts. 17 grains of gold per ton; the lode is squeezed a little by a hard bar of ground, and we expect in a short time it will open out again; the 740 feet level north of shaft has been driven 24 feet, total length 55 feet; lode 1½ feet wide, assaying 1 ounce 10 dwts. 13 grains of gold per ton; the 630 feet level north of west crosscut driven 27 feet, total length 246 feet 6 inches, we have just passed through an east and west dyke; the lode in present end is 1 foot 3 inches wide, assaying 1 ounce 14 dwts. 3 grains of gold per ton. No. 2 rise in the back of level risen 17 feet, total height 51 feet. Lode 2½ feet wide, assaying 1 ounce 8 dwts. of gold per ton. The 530 feet level north of west cross cut driven 25 feet, total length 721 feet 9 inches. Lode 4 feet wide, assaying 1 ounce 9 dwts. 16 grains of gold per ton. No. 6 new rise in back of level (100 feet north of No. 5) risen 13 feet 9 inches. Lode 3 feet wide, assaying 1 ounce 10 dwts. 14 grains of gold per ton. No. 5 rise risen 8 feet, total height 29 feet 6 inches. Lode 3 feet wide, assaying 1 ounce 3 dwts. 18 grains of gold per ton. No. 1 winze below level sunk 8 feet, total depth 18 feet. Lode 2½ feet wide, assaying 1 ounce 8 dwts. 19 grains of gold per ton. The 440 feet level north of west cross cut driven 29 feet 9 inches, total length 639 feet 3 inches. Lode 4 feet wide, assaying 1 ounce 15 dwts. 7 grains of gold per ton. No. 5 rise in back of level risen 10 feet, total length 24 feet. Lode 2½ feet wide, assaying 2 ounces 6 dwts. of gold per ton. No. 3 rise risen 3 feet, total height 82 feet 6 inches. This is communicated with 340 north of west crosscut. No. 3 winze below level sunk 4 feet 3 inches, total depth 16 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 14 dwts. 9 grains of gold per ton. No. 4 rise in back of 340 north of west crosscut driven 4 feet 9 inches, total height 50 feet. This is communicated with 240 feet level south of Ribblesdale's shaft. No. 3 winze below level sunk 19 feet, total depth 53 feet. Lode 4 feet wide, assaying 1 ounce 12 dwts. 17 grains of gold per ton. No. 4 incline winze below level sunk 14 feet 6 inches, total depth 22 feet. Lode 4½ feet wide, assaying 1 ounce 8 dwts. 20 grains of gold per ton.—Ribblesdale's shaft. This has been sunk 6 feet 9 inches, total depth 576 feet. Lode small, yielding a trace of gold. The 540 feet level north of shaft driven 20 feet, total length 168 feet. Lode 6 inches wide, assaying 1 ounce 17 dwts. 15 grains of gold per ton. The crosscut east of 440 feet level south of shaft has been driven 19 feet, total length 84 feet. At this point we met with the east part of lode. We are now engaged cutting through this, and as far as seen it is 2 feet 9 inches wide, assaying 16 dwts. of gold per ton. Winze below 440 feet level north of winze sunk below 340 north on south part of fold has been sunk 19 feet 6 inches, total depth 60 feet. Lode 4½ feet wide, assaying 1 ounce 10 dwts. 13 grains of gold per ton. The 340 feet level south of crosscut east of 340 south of shaft has been driven 11 feet, total length 63 feet. Lode 2 feet wide, assaying 1 ounce 9 dwts. 7 grains of gold per ton. We have suspended the driving of this end for a time and have put the rock drill to rise in back of level to communicate with winze sunk below 240 south of shaft. Rise has been put up 7 feet. Lode 2 feet wide, assaying 1 ounce 13 dwts. of gold per ton. 340 north of east crosscut driven 19 feet 6 inches, total length 88 feet 6 inches. Lode 2 feet wide, assaying 1 ounce 9 dwts. 8 grains. No. 2 rise in back of level risen 13 feet 9 inches, total height 56 feet 9 inches. Lode 2½ feet wide, assaying 1 ounce 3 dwts. 15 grains of gold per ton.—Carmichael's shaft. We are still continuing the cutting down of this shaft below the 315 feet level. The 315 crosscut west of shaft has been driven 19 feet, total length 531 feet. There is no alteration since last report. New rise in back of 225 north of shaft going up by north side of east and west dyke has been put up 11 feet 9 inches. Lode 2½ feet wide, assaying 1 ounce 15 dwts. 5 grains of gold per ton.—Rowe's shaft: This has been sunk 8 feet 6 inches, total depth below the 315 101 feet 6 inches. Lode 3 feet wide, assaying 3 ounces 7 dwts. 3 grains. Winze below 315 north of shaft sunk 3 feet 6 inches, total depth 50 feet 3 inches. Lode 2 feet 3 inches wide, assaying 18 dwts. 12 grains of gold per ton. This is suspended for a short time. Winze below 315 south sunk 8 feet, total depth 79 feet. Lode 3 feet wide, assaying 18 dwts. 5 grains of gold per ton.—Stopes. Dalyell's shaft. Stope in back of 685 north, south of 625 north winze cut 4 fathoms 9 inches. Lode 2 feet wide, assaying 17 dwts. 15 grains of gold per ton; new stope in bottom of 620 south, south of winze, cut 8 fathoms 1 foot 9 inches. Lode 2 feet wide, assaying 12 dwts. 17 grains of gold per ton; new stope north of winze cut 7 fathoms 4 feet. Lode 2 feet wide, assaying 15 dwts. 6 grains of gold per ton; stope in back of 620 south, north of Garland's 530 south winze cut 18 fathoms 3 feet 6 inches. Lode 6 feet wide, assaying 1 ounce 11 dwts. of gold per ton; stope in back of 620 north of north rise cut 10 fathoms 1 foot 9 inches. Lode 7 feet wide, assaying 17 dwts. of gold per ton; No. 1 stope south of rise cut 21 fathoms 6 inches. Lode 2 feet wide, assaying 18 dwts. of gold per ton; No. 2 stope south of rise cut 8 fathoms. Lode 2 feet wide, assaying 1 ounce 4 dwts of gold per ton; stope in back of 620 north of 530 north winze cut 7 fathoms 2 feet 6 inches. Lode 3 feet wide, assaying 1 ounce of gold per ton. No. 4 stope in back of 530 north of north rise cut 9 fathoms 4 feet 6 inches. Lode 4½ feet wide, assaying 18 dwts. 5 grains of gold per ton. No. 2 stope north of rise cut 4 feet 3 inches. This is suspended. Stope in back of 530 south of rise cut 13 fathoms 3 feet. Lode 3 feet wide, assaying 16 dwts. of gold per ton. Stope in back of 530 north of south rise cut 5 feet 6 inches. No sample taken. Stope in bottom of 440 north of north winze cut 7 fathoms 3 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 10 dwts. 13 grains of gold per ton. Stope south of winze cut 6 fathoms 6 inches. Lode 4 feet wide, assaying 19 dwts. 9 grains of gold per ton.—Garland's shaft. Stope in back of 530 north of No. 3 north rise cut 3 fathoms 3 inches. Lode 2 feet wide, assaying 17 dwts. of gold per ton. Stope south of rise cut 18 fathoms 2 feet 9 inches. No sample taken. This is stopped through to No. 2 rise. Stope in back of 530 south of No. 2 north rise cut 7 fathoms 3 feet 6 inches. Lode 7 feet wide, assaying 16 dwts. 8 grains of gold per ton. Stopes in back of 530 south of south rise cut 17 fathoms 2 feet 6 inches. Lode 5 feet wide, assaying 1 ounce 13 dwts. 5 grains of gold per ton. Stope in back of 440 north of rise south of west crosscut cut 1 fathom. No sample taken. Stope in back of 440 south of No. 4 north rise cut 4 feet 6 inches. Lode 4 feet wide, assaying 1 ounce 17 dwts. of gold per ton. Stope in back of 440 north of No. 2 north rise cut 2 fathoms 2 feet 9 inches. Lode 3 feet wide, assaying 1 ounce 10 dwts. 13 grains of gold per ton. Stope in back of 440 north of south rise cut 2 fathoms 6 inches. Lode 1 foot wide, assaying 1 ounce 12 dwts. 10 grains of gold per ton. Stope in back of 340 north of south rise cut 1 fathom 3 feet 9 inches. Lode 1 foot wide, assaying 1 ounce of gold per ton.—Ribblesdale's shaft. Stope in back of 340 north of shaft on fold cut 3 fathoms. Lode 12 feet wide, assaying 2 ounces 2 dwts. 7 grains of gold per ton. No. 1 stope below 240 north, north of winze on gold cut 3 fathoms. Lode 5 feet wide, assaying 1 ounce 16 dwts. of gold per ton. No. 2 stope north of winze cut 7 fathoms 3 inches. Lode 8 feet wide, assaying 1 ounce 11 dwts. 15 grains of gold per ton. Stope in bottom of 200 south of 240 north rise cut 7 fathoms 5 feet 3 inches. Lode 2 feet wide, assaying 1 ounce 10 dwts. 14 grains of gold per ton. Stope in bottom of 200 north of 240 south rise cut 6 fathoms 5 feet 3 inches. Lode 1 foot 9 inches wide, assaying 1 ounce 11 dwts. 8 grains of gold per ton. No. 1 stope south of No. 1 rise, in back of 240 south, cut 3 fathoms 9 inches, lode 1 foot 9 inches wide, assaying 1 ounce 13 dwts. 10 grains of gold per ton. No. 2 stope, south of rise, cut 2 fathoms 1 foot 2 inches, lode

5 feet wide, assaying 1 ounce 12 dwts. 22 grains of gold per ton. No. 1 stope, north of No. 2 rise, cut 11 fathoms 9 inches, lode 6 feet wide, assaying 1 ounce 6 dwts. of gold per ton. No. 2 stope cut 1 fathom 2 feet, lode 4½ feet wide, assaying 1 ounce 4 dwts. of gold per ton. No. 3 stope cut 6 fathoms 5 feet 3 inches. This is suspended.—Carmichael's shaft. Stopping out west side of 225 feet level north of shaft, and north of east and west dyke cut 3 fathoms, lode 2½ feet wide, assaying 15 dwts. 6 grains of gold per ton. The above stopping is for September month.—Returns. During September month 3350 tons of quartz were stamped, which produced 5370 ounces of gold, 1100 tons of tailings were treated which produced 227 ounces of gold—a total of 5597 ounces of gold.—Machinery. This, through-out the mine, is in good working order.

CRAVEN'S CALEDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, September 13: In the underhand stope from No. 9 level the reef will average about 9 inches. No. 9 level has been extended a further distance of 6 feet, making a total of 302 feet from the slide; the reef is pinched a little at present. In the first three stopes over the level the reef will average about 10 inches, and about 7 inches in the next three stopes. No. 8 level has been extended 5 feet, making a total of 377 feet from the slide; the reef is about 5 inches thick. In the first three stopes over the level the reef will average about 7 inches, and in the next three about 4 inches. No. 7 level has been extended a further distance of 6 feet, making a total of 453 feet from the slide. There are still a few leaders running through the formation. In three stopes over No. 6 level the reef will average about 5 inches of very good quality. No. 4 level has been extended a further distance of 10 feet, making a total of 119 feet from the old level. The reef is broken up a little in this drive at present, but in the first stope over it the reef will average about 6 inches, and in the next two 8 inches. The haulage of quartz for the fortnight is 104 tons, of which 77 tons went to the mill, and there are 27 tons in the paddock. At the Victoria and Queen shaft the cross cut has been extended a further 8 feet, making a total of 28 feet from the level. The reef on the footwall in front of the cross cut is 10 inches. In Nos. 1 and 2 stopes the reef will average about 6 inches, and in Nos. 3 and 4 stopes about 8 inches. We have raised 19 tons from this shaft, making a total of 109 tons for the present crushing which was commenced at the Prudence Mill on the 11th inst.—(Signed) G. Cabassi.

COROMANDEL.—Superintendent's report for fortnight ending October 6: Coromandel shaft, 420 feet level north. This end has been advanced during the fortnight 18 feet 6 inches, and is now 386 feet 6 inches from shaft. The lode has greatly improved in appearance, and is now 3 feet wide of solid quartz, worth half an ounce of gold per ton. Crosscuts have been extended east and west of this level at 250 feet north of shaft. 15 feet has been driven in each direction, without discovering anything better than the lode carried in the main drive, and this we consider to have sufficiently proved the ground. This rock drill has, therefore, been set to rise in the back of the 420 feet level at a point further north, where the lode is 2 feet wide, and worth 8 dwts. per ton. 320 feet north driven 14 feet 3 inches, total 526 feet 3 inches, and suspended. Lode in end very small and poor. This rock drill has been transferred to the 210 feet, and set to drive the crosscut east, which has hitherto been driven by hand labour. This crosscut has been driven since last report 5 feet, and is now 51 feet 6 inches from former drive. The end is letting down a stream of water, and the ground has a most promising appearance.—Prospect shaft 500 feet crosscut west. This has been extended a further 19 feet or 142 feet from shaft. There is no change in the ground.—500 feet level north driven 23 feet 6 inches and holed to 500 feet south of No. 2 winze. In the drive the lode ran out against the slide as it has done in the winze. The rock drill has now been started to crosscut west from the north end with the object of recovering this lode.—500 feet level south. Driven during the fortnight 28 feet, total 77 feet 6 inches. Lode 1 foot wide, very hard and unpromising in appearance. Assay value 3 dwts. 12 grains per ton.—440 feet level north of crosscut east. This drive, as last reported, was commenced on the second or eastern of the two lodges intersected by the crosscut. After a total drive of 20 feet the end was suspended, as the lode did not improve and the end was approaching the boundary. The machine has been brought back and started to drive south on the first lode intersected. 10 feet has been driven, and the lode, which at starting was 2 feet wide, worth 4 dwts., is now 1 foot 6 inches wide and assays 12 dwts. of gold per ton.

FORTUNA.—Mine report dated October 24: Canada Incoosa Mine. In the 150 fathom level driving west of O'Shea's engine shaft the lode contains some spots of ore. The lode in the 110 west of San Pedro's shaft is small and unproductive.—Los Salidos Mine. In the 200 east of Taylor's engine shaft the lode has fallen off considerably in value, and is now worth 1 ton per fathom. The lode in the 105 east of Palgrave's shaft is large, but does not contain sufficient ore to value. Luca's winze sinking below the 92 fathom level will be holed in the course of the present month.

FORBES REEF.—The manager reports progress for the month of September, under letter dated October 1, as follows: No. 1 mill. Tons milled, 1943; stamps working, 20; number of days mill ran, 22 days 7 hours; smelted gold won, 39 ounces.—Avalanche mill. Tons milled, 2202; stamps working, 20; number of days mill ran, 23 days 1½ hours; smelted gold won, 218 ounces 9 dwts. 22 grains.—Main shaft drifts. North drift 28 feet 6 inches, south drift 30 feet, total footage for month 58 feet 6 inches. Both drifts are still in broken country. No indications of the main reef has up to the present been met with in either drift.—Avalanche. There is no improvement in the value of the ore here as depth is attained. Most of the rich surface stringers have pinched out, leaving only the low grade stuff to be dealt with in the future. The necessary tramlines have been extended, and the mine kept in good working order.—Machinery. All machinery kept in repair, and fair working order.—Electric plant. The preparations for erecting this plant are in a forward state, and I expect the plant to reach here about middle of next month.

GOLD FIELDS OF MYSORE.—Mine report for two weeks ending October 8: South shaft. The 470 feet level north of shaft has been driven 5 feet 9 inches, total length 132 feet 9 inches. Lode 1 foot wide, assaying 12 dwts. 5 grains of gold per ton. 470 feet level south driven 5 feet 9 inches, total length 146 feet 3 inches. Lode is squeezed by a hard bar of ground, is now 6 inches wide, assaying 18 dwts. of gold per ton. The 380 feet level north of shaft has been driven 4 feet, total length 232 feet 7 inches. Lode 1 foot wide, assaying 13 dwts. 18 grains of gold per ton. 380 feet level south driven 5 feet, total length 230 feet 7 inches. Lode 2 feet wide, assaying 12 dwts. of gold per ton. The 280 crosscut east of shaft driven 5 feet 3 inches, total length 274 feet 9 inches. There is not much change since last report. The strata has a more regular underlie.—Prospecting. I am sending a report on this work.

GOLD FIELDS OF MYSORE.—Report on prospecting operations for two weeks ending October 8: West Balaghar Block. No. 1 shaft. The north drive at bottom of this shaft 117 feet from surface has been driven 6 feet 9 inches, total distance 97 feet. Lode 1 foot 8 inches wide assaying 17 dwts. 3 grains of gold per ton. South drive driven 4 feet, total distance 94 feet 9 inches. Lode 2 feet 9 inches wide assaying 14 dwts. 17 grains of gold per ton.—No. 2 shaft. The north drive at bottom of this shaft 100 feet from surface has been driven 3 feet 2 inches, total distance 92 feet 5 inches. Lode 9 inches wide assaying 8 dwts. 5 grains of gold per ton. South drive driven 5 feet, total distance 107 feet 6 inches. Lode 9 inches wide assaying 4 dwts. of gold per ton.—No. 3 shaft. This shaft has been sunk 3 feet 4 inches, total depth 120 feet 4 inches. The lode in present bottom is disordered, mixed with quartz and country rock, yielding a trace of gold. We have a lot of water to contend with here which retards the sinking considerably. The north drive 117 feet from surface has been driven 4 feet 11 inches, total distance 32 feet 9 inches. The lode is small, carrying a leader of quartz 4 inches wide assaying 10 dwts. 12 grains of gold per ton. South drive driven 15 feet, total distance 88 feet 3 inches. Lode 1 foot wide carrying a leader of quartz 6 inches wide assaying 1 ounce 5 dwts. 5 grains of gold per ton.—No. 4 shaft. The north drive 148 feet from surface has been driven 4 feet 3 inches, total distance 111 feet 6 inches. The lode at present is split up, carrying two leaders of quartz 6 inches and 8 inches wide assaying 11 dwts. of gold per ton. South drive driven 3 feet, total distance 92 feet 6 inches. Lode

disordered, carrying stringers of quartz yielding a trace of gold.—Road block. No. 3 shaft, north of No. 2 south drive has been driven 6 feet, total distance 84 feet 6 inches. Lode 1½ feet wide assaying 16 dwts. of gold per ton.—Ajjapular block. The shaft in the trench at this block has been enlarged and sunk 5 feet 3 inches, total depth 32 feet 3 inches. Lode in bottom is 18 inches wide assaying 5 dwts. 8 grains of gold per ton.

KEMPINKOTE.—Superintendent's report for fortnight ending October 1: Garland's 245 crosscut east has been advanced 5 feet, making a total length of 5 feet. The end is in quartz, but no definite walls have been met with as yet. The quartz carries gold by panning to the value of 1 dwt. to the ton. The top plat is almost completed, and in a few days sinking will be commenced for the bottom plat. 183 feet drive south has been advanced 33 feet 6 inches, making a total length of 218 feet 6 inches. A piece of hornblende schist has passed across the drift leaving 2 feet of lode in the back. The lode carries gold to the value of 3 dwts. to the ton. 183 feet drive north has been advanced 19 feet, making a total length of 73 feet. The end carries lode for its full width, which is still jointy and wet, and carries gold by panning to the value of 3 dwts. to the ton. 183 feet crosscut east has been advanced 6 feet, making a total length of 152 feet. At this distance hornblende schist has been met with, and the end became very hard. Driving is temporarily suspended.—No. 1 winze, 183 feet drive south. We are cutting out the eastern side for winze plat. The lode seems to be very strong at this point, which is 100 feet south of the crosscut from Garland's shaft. Henty's shaft has been sunk 5 feet, making a total depth of 224 feet. The rock still continues hard, and is of the same nature as last reported. 173 feet drive south has been advanced 15 feet, making a total length of 176 feet. The end carries lode for its full width, and gold to the value by panning of 3 dwts. to the ton. A few feet back a small piece of talc schist (country rock) was met with on the eastern side. Taking this as the footwall, the lode is about 15 feet wide. Owing to some necessary alterations in the assaying plant the value of gold in all cases had to be determined by panning.

LINARES LEAD.—Mine report dated October 24: Pozo Ancho Mine. In the 200 fathom level driving east of No. 276 winze on Warner's lode, the lode is favourable for driving through, but it does not contain any ore. The lode in the 200 west of the same winze (on Warner's lode) yields occasional stones of ore. The 178 west of Warner's crosscut continues unproductive. In the 200 west of Peill's engine shaft the lode is small, consisting chiefly of carbonate of lime, and yielding a little ore. The lode in the 155 west of the same shaft is well formed and promising, and is valued at 1 ton per fathom.—Los Quintos Mine, Taylor's engine shaft. In the 185 driving east, the lode is disarranged and unproductive. The lode in the 165 east is large and promising, with good stones of ore, and is valued at ½ ton per fathom. In the 150 east the lode contains a little ore, but not sufficient to value. The lode in the 130 east continues small and poor. Luis winze sinking below the 130 fathom level is going down in a large lode with good stones of ore.

MILL'S DAY DAWN UNITED.—Mine manager's report for fortnight ending August 27: Underlie shaft deepened 13 feet, total from No. 8 plat 130 feet. The formation is 6 feet wide, carrying several mundie leaders from 2 inches to 1 foot thick. No. 8 level west extended 19 feet, total from main level 50 feet, and holed to No. 3 winze. No. 8 level east driven and timbered 12 feet. There is 2 feet of medium quality stone on footwall.—No. 7 level west. No. 4 winze sunk 26 feet, total 70 feet. The stopes average 6 feet of good stone on main reef and 2 feet on footwall reef.—No. 7 hanging wall level. No. 2 winze sunk 30 feet, total 64 feet, on 2 feet of good stone. No. 3 winze sinking on 2 feet of medium quality stone. Hanging wall stopes average 3 feet 6 inches thick, good stone.—No. 6 level west. The stopes on footwall of Day Dawn reef carry 2 feet heavy mineral stone. No. 6 west footwall level stopped and driven 6 feet, total 126 feet, on 18 inches medium quality stone. Intermediate level extended 14 feet, total from main reef 184 feet. Stopes average 2 feet 6 inches good mundie stone. No. 5 east stopes average 5 feet good stone. No. 5 west stopes carry 2 feet heavy mineral stone. No. 3 east stopes carry 15 inches fair quality stone. Stone raised 1800 tons.

MYSON WEST AND MYSONE-WYNAAD CONSOLIDATED.—Tank Block: Mining manager (Mr. T. Rosworth Smith) reports by mail for September. South shaft has been sunk to a depth of 435 feet 6 inches, making a progress for the month of 3 feet 6 inches. We have unfortunately had two accidents in the shaft this month. On the 12th instant the traveller of the bottom pole broke and delayed us three days. During the last week of the month the feed donkey of the pump boiler broke down, and after putting on another donkey whilst repairing the first the second broke down. Since repairing, the pumps have worked very much better. We have ordered a new feed donkey, so that the boilers will not be dependent on one.—354 feet winze. This has been stopped, as it is deep enough to hole into the 400 north. The lode is 1 foot wide in the bottom, and assays 1 ounce 12 dwts.—354 feet north. The machine that was taken away from the winze has been put on here, and the end has been carried to 224 feet 6 inches from the shaft, making a progress of 6 feet. There is a little lode formation in the end, but no quartz as yet. 400 feet north end has been driven to a distance of 112 feet 6 inches from the shaft, making a progress of 32 feet 6 inches for the month. The end has been going through some very disturbed country running counter to the lode. The quartz occurs in stringers from 3 inches to 6 inches wide, which holed on for 3 or 4 feet, then gave out, and then came in again. The quartz is of very good quality, giving assays of over 2 ounces. The end is now looking better, and we hope to have got through the disturbed country. 400 south end has been carried to a distance of 76 feet from the shaft, making a progress of 18 feet for the month. For the past fortnight we were stopping down the level, which had been allowed to rise too much in order to make a road from tramway. The lode in the end is 3 feet 6 inches wide, and assays 2 ounces per ton. There can be no doubt that we are here on the main shoot from Kennedy's, which is rapidly coming into our property. The mill ran experimentally with different sized gratings for 200 hours, crushed 160 tons mixed stuff, of which 80 tons was quartz, and which yielded 73.89 ounces of gold. There is about 100 tons of mixed stuff on surface for crushing, which will be put through this month.

MOUNT LYELL.—The London committee have received the following report from the Melbourne board for the week ending September 13: Engine shaft No. 4 tunnel north drive 100 feet level. The north drive has been advanced 5 feet, total 25 feet. Country very hard conglomerate.—Engine shaft No. 4 tunnel No. 2 cross cut 75 feet level. The rich ore body has been proved for a thickness of 6 feet, and is still showing all over the face. Ore broken for the week 16 tons 10 cwt., giving 26,000 ounces silver.—Stopes. The stopes above this level show no change.—Engine shaft No. 4 tunnel south drive 50 feet level. The south drive has been advanced 3 feet, total 189 feet. The country has been very hard but is improving again.—Engine shaft No. 4 tunnel north drive 50 feet level. The north drive has been advanced 7 feet, total 87 feet. A favourable change has come in the last 5 feet being in baryta spotted with fahlore.—Engine shaft No. 4 tunnel stopes 50 feet north. Work in stopes on the upper floor has been carried on as usual and rich ore broken as required.—No. 4 tunnel rise over old winze. The rise has been put up 4 feet, total 29 feet. The two veins of rich ore are somewhat contracted.—No. 5 tunnel. The contractors have driven 15 feet, total length 815 feet. The country is sandstone and conglomerate, good working ground.

NO. 7 NORTH EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers Sept. 14: Since my last report Gonion and party have given up the middle stopes in the stalls over No. 3 level as the stone was too poor, but they have continued working the stopes next to the Golden Gate boundary with two men, and the rest of the party have taken a block between the No. 4 and the intermediate level underneath Perry and party; they have at present from 6 to 9 inches of fair mineral stone in the face for a distance of 12 feet along the stopes. Perry and party are stopping from the back of the intermediate level on a mixture of quartz and formation carrying heavy mineral from 9 inches to 2 feet in thickness for a distance of 20 feet along the stopes. During the

month of August the aggregate crushings of the tributaries were 156 tons for a yield of 159 ounces, and the profit to the company was £84 9s. 6d.

OREGUM.—Superintendent's report for fortnight ending October 9: Taylor's shaft sunk 10 feet 6 inches, depth below the 560 feet level 82 feet 6 inches. Lode 3 feet wide, assay value 3 ounces 5 dwts. 8 grains. The 560 feet level south driven 18 feet 6 inches, total 152 feet. Lode 1 foot 3 inches, value 2 ounces 5 dwts. 7 grains. No. 1 winze 560 feet level south sunk 6 feet 9 inches, total 12 feet. Lode 2 feet 6 inches, value 2 ounces 6 dwts. 19 grains. No. 1 winze, 460 feet level south sunk 8 feet, total 87 feet 9 inches. Lode 1 foot 3 inches, value 2 ounces 3 dwts. 13 grains. No. 2 winze 460 feet level south sunk 5 feet 6 inches, total 73 feet 6 inches. Lode 1 foot 6 inches, value 1 ounce 2 dwts. 21 grains. No. 3 winze, 460 feet level south sunk 7 feet, total 39 feet. Lode 4 feet carried, value 12 dwts. No. 1 rise 460 feet level south commenced, risen 19 feet. Lode 4 feet wide, value 10 dwts. 21 grains. No. 4 winze 360 feet level south sunk 6 feet, total 26 feet 6 inches. Lode 3 feet 6 inches, value 1 ounce 19 grains. The level north from back of No. 4 rise, 280 feet level south driven 3 feet, total 8 feet. Lode 9 inches, value 1 ounce 10 dwts. 12 grains. Wallroth's shaft sunk 10 feet, total 916 feet. Lode 1 foot, value 9 dwts. 19 grains. The 860 feet level south driven 17 feet, total 103 feet. Lode 1 foot, value 10 dwts. 21 grains. No. 1 winze 860 feet level south sunk 6 feet 9 inches, total 8 feet 9 inches. Lode 2 feet, value 7 dwts. 15 grains. The 860 feet level north driven 19 feet 3 inches, total 60 feet. Lode 1 foot, value 6 dwts. 12 grains. The 760 feet level south driven 5 feet 3 inches, total 268 feet. Lode 4 inches, value 4 dwts. 8 grains. No. 1 winze 760 feet level south sunk 4 feet 3 inches, total 50 feet 9 inches. Lode 1 foot 6 inches, value 9 dwts. 19 grains. No. 2 rise 760 feet level south risen 6 feet 9 inches, total 22 feet 9 inches. Lode 1 foot 6 inches, value 1 ounce 17 grains. The 760 feet level north driven 5 feet 6 inches, total 141 feet. Lode 2 feet, value 5 dwts. 10 grains. No. 1 winze 760 feet level north sunk 5 feet 9 inches, total 42 feet. Lode 8 inches, value 6 dwts. 2 grains. The 660 feet level south driven 19 feet, total 723 feet 6 inches. Lode 4 feet 6 inches, value 1 ounce 1 dwt. 19 grains. No. 2 winze 660 feet level south sunk 1 foot 9 inches, total 69 feet 6 inches. Lode 1 foot, value 12 dwts. No. 3 winze 660 feet level south sunk 4 feet, total 62 feet 6 inches. Lode 8 inches, value 6 dwts. 12 grains. No. 4 winze 660 feet level south sunk 2 feet 9 inches, total 39 feet. Lode pinched, no sample. No. 5 winze 660 feet level south sunk 6 feet 3 inches, total 17 feet 3 inches. Lode 4 feet, value 3 ounces 3 dwts. 3 grains. No. 7 winze 560 feet level south sunk 3 feet 6 inches, total 32 feet 6 inches. Lode 1 foot 6 inches, value 1 ounce 3 dwts. 22 grains. The 560 feet level north driven 9 feet 6 inches, total 276 feet 9 inches. Lode 4 inches, value 1 ounce 6 dwts. 2 grains. The 360 feet level north driven 12 feet 6 inches, total 297 feet 9 inches. Lode 5 inches, value 5 dwts. 10 grains. The 280 feet level north on fold, driven 17 feet, total 36 feet 6 inches. Lode 1 foot, value 9 dwts. 19 grains. The 215 feet level north driven 8 feet 3 inches, total 532 feet 3 inches. Lode 10 inches, value 2 ounces 3 dwts. 13 grains. No. 4 winze 215 feet level north sunk 6 feet, total 37 feet 3 inches. Lode 1 foot 3 inches, value 1 ounce 2 dwts. 21 grains. No. 4 rise 215 feet level north risen 6 feet 4 inches, total 13 grains. Lode 1 foot 6 inches, value 1 ounce 7 dwts. 5 grains. Low's shaft sunk 5 feet 9 inches, total 623 feet 1 inch. The 610 feet level south driven 11 feet 3 inches, total 38 feet 3 inches. The strata is still disordered by the influence of cross course. Lode not well defined. The 510 feet level south driven 18 feet, total 240 feet 3 inches. Lode 8 inches, value 12 dwts. No. 1 winze 510 feet level south sunk 6 feet, total 13 feet. Lode 1 foot 3 inches, value 10 dwts. 21 grains. Probyn's shaft sunk 8 feet 6 inches, total 1044 feet. The 950 feet level south driven 12 feet 6 inches, total 235 feet 6 inches. Lode 8 inches, value 9 dwts. 19 grains. No. 1 winze 950 feet level south sunk 5 feet, total 11 feet. Lode 1 foot 3 inches, value 8 dwts. 17 grains. No. 1 winze 950 feet level north sunk 2 feet 9 inches, total 61 feet 3 inches. Lode 4 inches, value 6 dwts. 12 grains. The 560 feet level south driven 6 feet 6 inches, total 320 feet 3 inches. Lode very small, no sample.—No. 2 trial shaft. The 250 feet level south driven 5 feet, total distance 81 feet 9 inches. Lode disordered and small at present. The 250 feet level north driven 7 feet, total 81 feet 6 inches. Lode 4 feet, value 6 dwts. 12 grains.—Stopes for the month, Taylor's shaft. Back of 460 feet level south stopped 19½ fathoms. Lode 4 feet 4 inches wide, assay value 14 dwts. 12 grains. Bottom of 360 feet level south stopped 3½ fathoms. Lode 4 feet 6 inches, value 1 ounce 1 dwt. 14 grains. Back of 360 feet level south stopped 10½ fathoms. Lode 7 feet 6 inches, value 9 dwts. 19 grains. Bottom of 280 feet level south stopped 23 fathoms. Lode 5 feet 6 inches, value 7 dwts. 14 grains. Back of 280 feet level south stopped 3 fathoms. Lode 1 foot 9 inches, value 1 ounce 3 dwts. 22 grains. Bottom of level south from back of No. 4 rise 280 feet level stopped 6½ fathoms. Lode 1 foot 6 inches, value 1 ounce 8 dwts. 7 grains.—Wallroth's shaft. Back of 560 feet level south stopped 35½ fathoms. Lode 2 feet 3 inches, assay value 1 ounce 7 dwts. 5 grains. Bottom of 560 feet level north stopped 4 fathoms. Lode 1 foot 6 inches, value 1 ounce 15 dwts. 22 grains. Bottom of 460 feet level south stopped 12½ fathoms. Lode 1 foot 8 inches, value 1 ounce 3 dwts. 6 grains. Bottom of 460 feet level north stopped 9½ fathoms. Lode 1 foot 6 inches, value 1 ounce 6 dwts. 3 grains. Bottom of 360 feet level south stopped 23½ fathoms. Lode 2 feet 4 inches, value 1 ounce 5 dwts. 12 grains. Back of 360 feet level south stopped 6½ fathoms. Lode 1 foot 6 inches, value 1 ounce 12 dwts. 16 grains. Bottom of 360 feet level north stopped 3½ fathoms. Lode 1 foot 9 inches, value 10 dwts. 21 grains. Bottom of 280 feet level south stopped 19½ fathoms. Lode 3 feet 3 inches, value 1 ounce 10 dwts. 2 grains. Bottom of 215 feet level north stopped 9½ fathoms. Lode 1 foot, value 2 ounces 13 dwts. 13 grains.—Low's shaft. Excavation for plat at 610 feet level 3½ fathoms. Bottom of 430 feet level south stopped 13½ fathoms. Lode 1 foot 3 inches, value 2 ounces 6 dwts. 6 grains. Back of 430 feet level south stopped 1½ fathom. Lode 1 foot, value 1 ounce 1 dwt. 19 grains. Bottom of 430 feet level north stopped 8 fathoms. Lode 1 foot, value 12 dwts. Back of 350 feet level south stopped 1 fathom. Lode 10 inches, value 13 dwts. 2 grains. Back of 270 feet level south stopped 1½ fathom. Lode 1 foot, value 1 ounce 2 dwts. 21 grains. Back of intermediate level north, back of 200 feet level south stopped 3½ fathoms, lode 1 foot, value 1 ounce 17 grains.—Probyn's shaft. Bottom of 560 feet level south stopped 10½ fathoms, lode 1 foot, value 16 dwts. 20 grains. Bottom of 366 level north stopped 2½ fathoms. Lode 3 feet, value 2 ounces 6 grains.—Exploratory work, Wallroth's shaft. The crosscut east from 460 feet level north driven 5 feet 3 inches, total 12 feet 9 inches. The crosscut west from 280 feet level south toward's Munday's lode driven 11 feet 6 inches, total 533 feet 6 inches. Reverting to the last report we stated that the end at 522 feet contained patches of quartz and calc spar, with water issuing very freely. This has proved to be a lode 4 feet 6 inches wide, with alternating branches of quartz, calc spar, and schist interspersed with pyrites, a sample from which by assay gave 5 dwts. 10 grains of gold per ton of lode matrix. The lode is well defined, and we thought it advisable to drive south on it for further proof. The end of crosscut is about 7 feet beyond the lode. The strata there is clean country rock, and comparatively dry. The crosscut east from 280 feet level south driven 28 feet, total 100 feet.—Probyn's shaft. The crosscut east from 450 feet level south driven 24 feet, total 331 feet 6 inches. At a distance of 321 feet a branch of quartz intermixed with schist and pyrites was intersected, which assayed 4 dwts 8 grains per ton. We think it advisable to continue the crosscut. During the month of September 4126 tons of quartz were crushed, which produced 4309 ounces of gold; 4640 tons of tailings were treated, which yielded 988 ounces of gold; total return, 5297 ounces of gold.

RIPANJI QUICKSILVER.—The manager reports: For 56 hours run to 27th inst., the yield of finished ore was 19 tons 6 cwt. 50 tons waiting orders.

SUTHERLAND REEF.—Mine manager reports under date October 4: I yesterday received a wire informing me that the whole of the pumping plant has left for the mine, and that 12 more wagons would load yesterday with battery stuff. I am also advised from Johannesburg that transport is now plentiful.—Main shaft. This has been sunk 12 feet during the week, and the reef continues very good, showing visible gold with well defined hanging walls.

PUNJOM.—Panjom, August 31: August shaft. The bottom level north has been extended 5 feet 6 inches, and is now in what appears to be true hanging wall country rock. We may, however, continue this level a few feet more, so as to prove beyond doubt that there is nothing left in that direction. The total length of this drive from shaft is 155 feet.—No. 1 east. Not much progress has been made here owing to the ground being very hard and bad for blasting. I think, however, that a change for the better is taking place, and that the next month should show better results. Distance driven 9 feet 6 inches. Total length from north drive 28 feet.—No. 2 east. This level was commenced in the early part of the month on the best looking part of the lode to go back east, and junction with the north and south lode. After driving 29 feet it reached a class of ore very similar to that seen in our north and south lode, where the best gold was found, and free gold could be got both in the stone and by washing—in fact, specimen gold was got on one occasion. A small crosscut was opened out on the north side to go out to the hanging wall to prove if the north and south lode had been intersected, but the hanging wall was reached after driving 8 feet 6 inches, thus proving that we were still on the east and west lode. Total drive east 43 feet.—No. 1 west. This is a new drive on the footwall of the reef to go out west and so test the ground in that direction. The ore in the face is very similar to that passed through in crosscutting the reef, and is too poor to pay for milling. I think this should improve as we get out under the ground seen in the No. 4 west at the 110 feet level. Distance driven 6 feet.—Winzes. We are preparing for sinking the necessary winzes at the 110 feet level for opening up sections for stoping and ventilating the mine below that level and hope to see them commenced in the early part of the coming month.—Trial shafts. Levels No. 2 and 3. Stoping over these levels has been carried on as hitherto, but as the ground is getting very heavy and water coming in pretty freely, we shall discontinue work here for the present, and endeavour to operate on it by means of a drive shaft from the 110 feet level.—No. 3 Trial shaft. The level off this shaft has been extended a further distance of 27 feet 6 inches through ore of very low grade. The lode, however, seems well defined and fully 4 feet wide in places. Operations here, too, have been discontinued for the present for the reasons given above. Total distance from shaft 82 feet 6 inches.—Large Stopes. Both the upper and lower sections are in good order, and giving large quantities of average quality stone for the mill.—Surface drive. This has been carried the old heap of sluice headings, and is now ready for use. Total length of drive 124 feet.—Output of ore for the month. This has totalled 1140 tons.—Milling. This was carried on during 21-6 days, crushing 1220 tons for an output of 482 ounces 10 dwts. of smelted gold, including 30 ounces, the produce of 16 tons of concentrates treated by Berdan pans.—Rainfall. The rainfall during the month totals 9½ inches.—General. The usual work coming under this head has had attention.—Health of camp. This has improved, and is fairly good.

TRANSVAAL GOLD EXPLORATION AND LAND.—Extracted from general manager's advice dated October 4:—Kameel's mill. The plate tables were finished and put in position. The viaduct for conveying ore to the breaker was practically complete.—The ta-Kameel's ropeway. The excavations for foundations of top station were finished.—Cyanide plant. The excavations and masonry work made good progress. The plant was beginning to arrive.—Mines. The work at all the mines was proceeding steadily. The deposit struck on the opposite side of Peach Tree Creek from Beta Mine will in future be referred to as "Tau"

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A MEETING of the DIRECTORS, held THIS DAY, it was Resolved—

"That an Interim Dividend (free of Income Tax) of One Shilling per Share be, and is hereby declared, payable on the 17th day of November, 1894, to the Shareholders on the books of the Company on the 3rd November, 1894, and that the Transfer Books be closed during the said 3rd November, 1894."

By Order of the Board,

I. CROCKER, Secretary.

RIO TINTO COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that the SHARE TRANSFER BOOKS of the Company will be closed from Monday, the 5th, to Saturday, the 10th November, both days inclusive, for the preparation of the Interim Dividend, which will be paid on the 12th November, 1894.

Holders of Share Warrants to Bearer are informed that they will receive payment of the said Interim Dividend at the rate of 4s. per Share, free of Income Tax, on and after Monday, the 12th November, 1894, on presentation of Coupon No. 32, either at the Company's Office in London, or at the Société Générale, Rue de Provence 56, Paris, or at the Deutsche National Bank in Bremen.

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By Order,

GEO. N. THOMSON, Secretary.

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By JOHN BIRKINBINE.

(Continued from page 1192.)

Important Iron Ore Producers.

WHILE as a rule the larger iron ore producers, owing to improved methods of mining, lower proportionate fixed charges, &c., are better able to meet competition than the smaller mines, the effect of a decreased demand was severely felt by all, in some instances necessitating the closing of mines, and in others operating with a diminished force. During the year 1893 there were but 54 mining establishments which produced over 50,000 tons, while in 1892 there were 71 such. The combined product for 1893 from the 54 operations was 8,302,099 long tons, equivalent to 71.65 per cent. of the entire output of the country. Of these important mines 24 were situated in Michigan, 11 in Alabama, seven in Minnesota, four in Wisconsin, three in New York, two in Virginia, and one each in New Jersey, Pennsylvania, and Tennessee. Of these mines four produced over 400,000 long tons, five between 300,000 and 400,000 tons, three between 200,000 and 300,000 tons, 18 between 100,000 and 200,000 tons, and 24 between 50,000 and 100,000 tons. The average output of the 54 large producers in 1893 was 153,743 long tons per mine, but a similar average for the 71 large producers in 1892 was 176,428 long tons.

Material Handled to Obtain Iron Ores.

In collecting the statistics for the year 1893 an endeavour was made to obtain approximate figures as to the total amount of material moved in winning iron ore. Generally speaking the brown hematites require the removal of the largest amount of material, followed by the carbonate, red hematite, and magnetite ores in the order named. It was found impossible to obtain complete figures, as at a number of the mines no records are kept, at others (brown hematites) only the record of the number of tons passing through the washers was preserved, the overtop or stripping where the ore was won by open cut not being included, except where some of this overtop went into the washers; but the range of quantities are furnished by various reporters. The quantity of material handled in some of the States is due to opening new mines, dead work, mining lean magnetite or red hematite, which was concentrated, &c. Most of the brown hematite workings are open cut, and a considerable overtop must be removed until the ore body proper is reached, which will yield 1 ton of ore from 2 to 8 tons of material put through the washer, although there are exceptional cases where still greater averages are handled.

The carbonate ores require roasting to raise the iron contents by removing the carbonic acid, but as this class of ore is generally mined underground there is a smaller quantity of refuse material, and in most localities about 2 tons of material handled per long ton of ore produced may be taken as an average, although sometimes 6 or more tons of material must be removed and treated to produce a ton of merchantable ore of this class.

The red hematite and magnetite ores are mined chiefly underground, and, with the exception of some lean magnetite, which requires concentration, are ready for shipment as they come from the mine, after the rock has been sorted out, and the larger pieces of ore crushed to a size appropriate for furnace use.

Importation of Foreign Iron Ores.

As would naturally be expected, the low price of Lake Superior and other domestic iron ores, and the generally decreased demand, resulted in a restricted importation of foreign ores. With the exception of the Cuban ores (the only two operations on this island which have been as yet worked, being owned by American companies and used to supply Pennsylvania and Maryland furnaces), Portugal and Turkey in Asia, all the other foreign contributors to our iron ore supply sent smaller amounts of iron ore in 1893 than in the previous year, the total for the year ending December 31, 1893, being 526,951 long tons, valued at \$906,687, against 806,585 long tons, valued at \$1,795,644, imported in 1892.

The value of the iron ore imported does not represent the true value of the material at the mines, but merely the selling prices at the port of shipment, to which must be added the ocean carriage, import duty of 75 cents per ton, dock charges, commissions, &c. Some of these ores, while classed as iron ore, are used for other purposes. Thus, the high valuation placed on those imported from Turkey in Europe and Asia, and other countries (mainly British Australasia), is due to the chromic oxide contents. Some of the Grecian and other ores contain considerable manganese, thus enhancing their value.

The Bureau of Statistics of the U. S. Treasury Department has kindly supplied tables showing the quantities and values of iron ore imported into the United States during the year ending December 31, 1893, to which, for purposes of comparison, similar data for the years 1889, 1890, 1891, and 1892 have been added. From these it will be seen that, as in the previous year, Cuba contributed the largest proportion in 1893, her quota of 349,977 long tons being two-thirds (66.4 per cent.) of the total importations. The next important contributor was Spain, followed in order by England, French Africa, and Oceania, and Italy, the last three sending almost equal amounts. The Cuban ore came from the south-eastern portion of that island; the Spanish importations from the southern and northern provinces; those of Italy from the island of Elba; England supplied ores from the Hordbarrow and other mines; French Africa and Oceania sent ores principally from Algeria and New Caledonia; Greece from the islands of Seriphos (and Cyprianos); British Columbia from Texada Island; Portugal from the northern portion of the country, while Turkey's contribution was from the western sections of their possessions in Europe and Asia. All or nearly all of the Canadian iron ore was obtained near the city of Ottawa.

If the importations are divided according to customs districts it will be seen that, as in former years, the ports of Baltimore and Philadelphia were the prominent points of entry, increasing their joint percentage from 95 per cent. of the total imports in 1891 and 1892 to 97.5 per cent. in 1893. The ore imported at Puget Sound, Washington, viz., 409 tons from British Columbia, was used as a flux in silver smelting. The major portion of the iron ores imported are red and brown hematites, although some magnetite and chromic and manganeseiferous iron ores are also brought to this country. As would naturally be supposed from an examination of the points of entry, most of the iron ore is used at or near the Atlantic seaboard—in fact, two iron and steel companies, viz., the Bethlehem Iron Company and Pennsylvania Steel Company, consumed the major portion of the ores at their furnaces at Bethlehem and Steelton, Pennsylvania, and Sparrow Point, Maryland.

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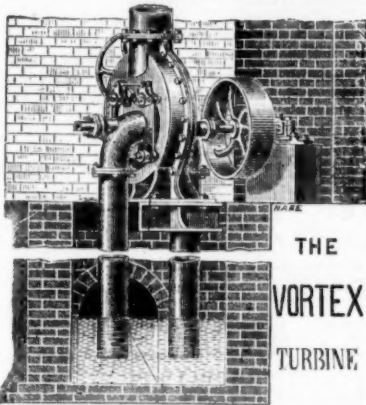
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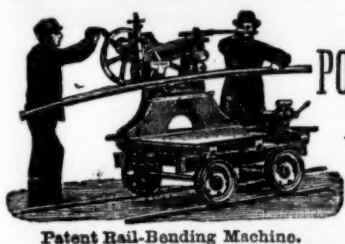


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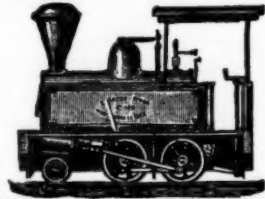
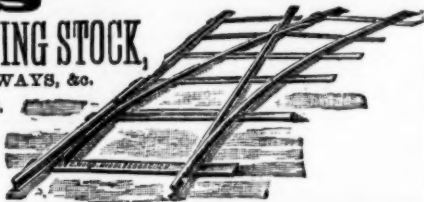
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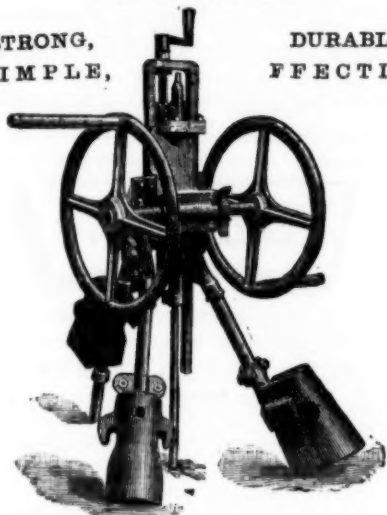
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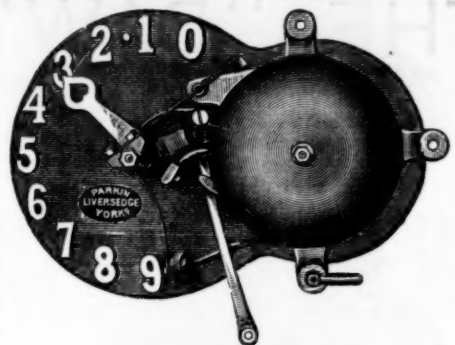
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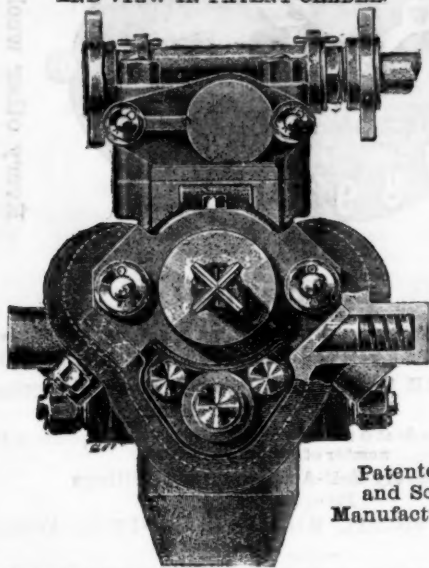
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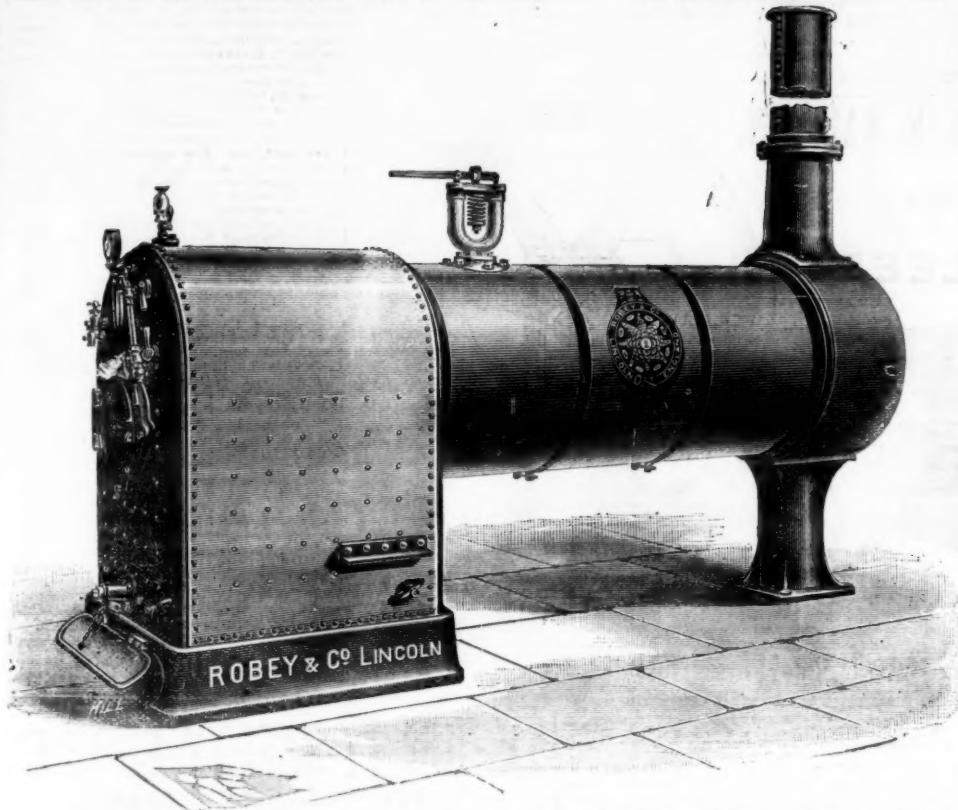
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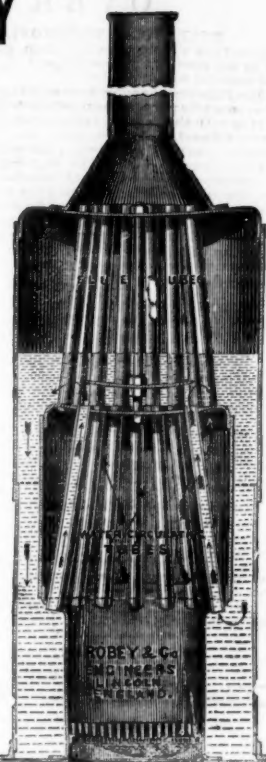


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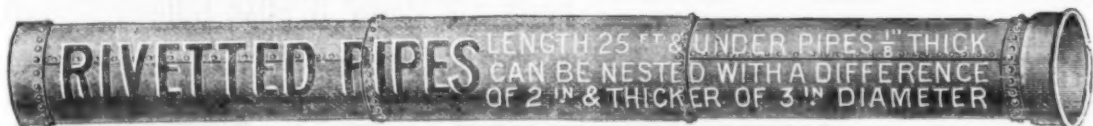
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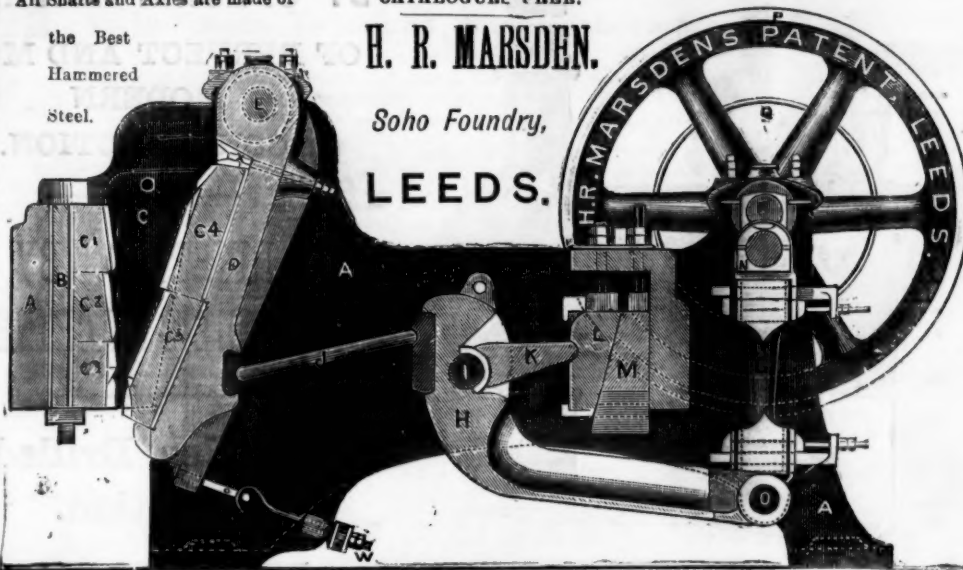
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